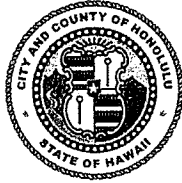


DEPARTMENT OF PLANNING AND PERMITTING
KA 'OIHANA HO'OLĀLĀ A ME NĀ PALAPALA 'AE
CITY AND COUNTY OF HONOLULU

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HOPE PO'O

August 31, 2023

2023/ED-9(ST)

Ms. Mary Alice Evans, Director
State of Hawaii
Office of Planning and Sustainable Development
Environmental Review Program
235 South Beretania Street, Room 702
Honolulu, Hawaii 96813

Dear Ms. Evans:

SUBJECT: Chapter 343, Hawaii Revised Statutes
Chapter 25, Revised Ordinances of Honolulu
Draft Environmental Assessment (DEA)
Project: Hawaii Fueling Facilities Corporation (HFFC)
Sand Island Fuel Facility Stormwater System Upgrade Project
Applicant: HFFC
Agent: Burns and McDonnell (Jeremy Jewell)
Location: 6 Sand Island Access Road – Kalihi-Kai
Tax Map Keys: 1-2-025: 020 and 021

With this letter, the Department of Planning and Permitting hereby transmits the DEA and the Anticipated Finding of No Significant Impact for the HFFC Sand Island Facility Stormwater System Upgrade Project, located at Kalihi-Kai, Oahu, for publication in the September 8, 2023, edition of *The Environmental Notice*.

We have uploaded an electronic copy of this letter, the publication form, and the DEA to your online submittal site.

Should you have any questions, please contact Steve Tagawa, of our Land Use Approval Branch, at (808) 768-8024 or via email at stagawa@honolulu.gov.

Very truly yours,


for Dawn Takeuchi Apuna
Director

From: webmaster@hawaii.gov
To: [DBEDT OPSD Environmental Review Program](#)
Subject: New online submission for The Environmental Notice
Date: Thursday, August 31, 2023 3:56:30 PM

Action Name

Hawaii Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project

Type of Document/Determination

Draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI)

HRS §343-5(a) Trigger(s)

- (1) Propose the use of state or county lands or the use of state or county funds

Judicial district

O'ahu - multiple districts

Tax Map Key(s) (TMK(s))

(1)1-2-025:020; 1-2-025:021

Action type

Applicant

Other required permits and approvals

Building and trenching permits

Discretionary consent required

Special Management Area Use Permit on State-owned land

Approving agency

Department of Planning and Permitting

Agency contact name

Steve Tagawa

Agency contact email (for info about the action)

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[Map It](#)

Applicant

Hawaii Fueling Facilities Corporation

Applicant contact name

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Was this submittal prepared by a consultant?

Yes

Consultant

Burns and McDonnell Engineering Co., Inc.

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[Map It](#)

Action summary

This is an EPA mandated upgrade to the secondary spill containment and stormwater management system at the Applicant's jet fuel storage facility at 6 Sand Island Access Road. The 8.4-acre facility, built in the 1960s, consists of 16 large-capacity aboveground storage tanks with a capacity of 42 million gallons, and is the sole supplier of jet fuel for the Daniel K. Inouye International Airport. Jet fuel is transported to this storage facility via pipelines from refineries located in Kalaeloa (formerly Campbell Industrial Park). The upgrades includes new asphalt pavement, spray-on industrial coating on exposed areas, 31 collection inlets, 4 lift stations with sump pumps and a above-ground oil-water separator. The site is owned by the State Department of Transportation, which triggers the preparation of an EA per Chapter 343. Upon DPP acceptance of a Final EA and a FONSI determination, the SMA application can accepted for processing with decision-making by the Honolulu City Council.

Reasons supporting determination

The Project is not anticipated to have a significant impact on the SMA pursuant to criteria set forth in Section 200.1-13, HAR.

Attached documents (signed agency letter & EA/EIS)

- [Draft_EA_HFFC-Sand-Island_070723.pdf](#)
- [HFFC.ERPpub.request.pdf](#)

Action location map

- [HFFCLocation.zip](#)

Authorized individual

Steve H. Tagawa

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.



Prepared for:
Hawai'i Fueling Facilities Corporation

Draft Environmental Assessment

Hawai'i Fueling Facilities Corporation
Sand Island Fuel Facility Stormwater System
Upgrade Project
6 Sand Island Access Road,
Honolulu, Hawai'i

7 July 2023

Project No.: 0682737

Signature Page

7 July 2023

Draft Environmental Assessment

Hawai'i Fueling Facilities Corporation
Sand Island Fuel Facility Stormwater System Upgrade Project
6 Sand Island Access Road, Honolulu, Hawai'i



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Acronyms and Abbreviations

AQI	Air Quality Index
AST	aboveground storage tank
BMP	best management practice
CZM	Coastal Zone Management
dBA	decibel
DLNR	Department of Land and Natural Resources
DPP	Department of Planning and Permitting
EPA	Environmental Protection Agency
ERM	Environmental Resources Management, Inc.
HAR	Hawai'i Administrative Rule
HDOH	Hawai'i State Department of Health
HFFC	Hawai'i Fueling Facilities Corporation
HNL	Daniel K. Inouye International Airport
HRS	Hawai'i Revised Statutes
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OWS	oil-water separator
SFS	Signature Flight Support, LLC
SI Facility	Sand Island Fuel Facility
SHPD	State Historic Preservation Division
SMA	Special Management Area

1. PROJECT SUMMARY

Proposed Project	Hawai'i Fueling Facilities Corporation Sand Island Fuel Facility Stormwater System Upgrade Project
Applicant	Hawai'i Fueling Facilities Corporation 3201 Aolele Street, Honolulu, Hawai'i 96819 (808) 833-3291
Approving Agency	City and County of Honolulu Department of Planning and Permitting
Agent	Burns & McDonnell
Project Location	Sand Island Fuel Facility 6 Sand Island Access Road Honolulu, Hawai'i 96819
Tax Map Key	1-2-025:020, 1-2-025:021
Ownership	State of Hawai'i Department of Transportation Airports Division
Lot Area	8.4 acres
Zoning	I-3 Waterfront Industrial District
Special District	Not applicable
State Land Use	Urban
State Designation	Special Management Area
Existing Land Use	fuel storage facility (Industrial)
Proposed Action	Improvements to the stormwater system
Alternatives	<ul style="list-style-type: none"> ■ No action alternative ■ Increasing depth of slurry wall
Chapter 343, Hawai'i Revised Statutes Trigger	Special Management Area Major Permit (wholly within Special Management Area)
Total Project Cost	\$9MM total installed construction cost
Project Schedule	The Project is anticipated to commence construction in the first quarter of 2025 and is anticipated to be completed in the third quarter of 2026. A construction period of 18 months is anticipated.
Permits that may be Required	<ul style="list-style-type: none"> ■ City and County of Honolulu <ul style="list-style-type: none"> - Building Construction Permit - Special Management Area Permit ■ Hawai'i Department of Health <ul style="list-style-type: none"> - Construction Environmental Hazard Management Plan approval - Subsurface Aeration & Ventilation approval ■ Department of Health Clean Water Branch <ul style="list-style-type: none"> - National Pollutant Discharge Elimination System <ul style="list-style-type: none"> ▪ Construction Stormwater General Permit ▪ General Permit Authorization Discharges Associated with Construction Activity Dewatering
Anticipated Determination	Finding of No Significant Impact

2. PROJECT DESCRIPTION, PURPOSE AND NEED, AND ENVIRONMENTAL ASSESSMENT PROCESS

2.1 Project Location

The Hawai'i Fueling Facilities Corporation (HFFC) Sand Island Fuel Facility (the "Site" or "SI Facility") is located at 6 Sand Island Access Road, Honolulu, Hawai'i (Figure 1). It is approximately 200 feet east of the Ke'ehi Lagoon Small Boat Harbor, which is connected to Mamala Bay and the Pacific Ocean. The SI Facility is entirely within the Special Management Area (SMA) but was built in the early 1960s prior to the enactment of the Shoreline Protection Act and establishment of the SMA in 1975. The Sand Island Fuel Facility Stormwater System Upgrade Project ("Project" or "Proposed Action") consists of upgrades to the existing stormwater system. The "Project Site" includes the area within the fenced industrial site of the SI Facility and the location of the stormwater discharge pipe that will extend approximately 100 feet outside of the fenced facility (Figure 2).

2.2 Background

HFFC owns both the SI Facility and the Airport Facility, which are located on land leased from the Department of Transportation Airport Division (DOTA). HFFC has contracted Signature Flight Support (SFS) to manage and operate both these fuel facilities on Oahu, as well as the other HFFC fuel facilities on the other islands of Hawaii.

The HFFC SI Facility receives, stores, and together with the HFFC Airport Facility, distributes jet fuel to the Daniel K. Inouye International Airport (HNL), also known as Honolulu International Airport. The SI Facility is the sole supplier of jet fuel to HNL and any interruption in the operation of the SI Facility would significantly impact the domestic and international travel industry and the Hawai'i economy in general.

Jet fuel is received at the SI Facility via underground pipelines from tanker ships berthed at the Honolulu Harbor Pier 51 and from Par Hawai'i Refinery as well as Island Energy Services Refinery located on the west side of O'ahu. The SI Facility is subdivided into Lots 2, 3, and 3.5 containing a total of 16 large-capacity aboveground storage tanks (ASTs) with a total capacity of approximately 42 million gallons of jet fuel. Lot 2 contains seven ASTs, while Lots 3 and 3.5 contain a total of nine ASTs. The SI Facility is equipped with a secondary containment system comprising a concrete perimeter wall, gravel covered berm, and a 6-foot-deep underground containment slurry wall. In addition, an 8-foot-deep by 600-foot-long interceptor trench was installed between the SI Facility and the Ke'ehi Lagoon Small Boat Harbor in 2016 (Environmental Resources Management, Inc. [ERM] 2023). Jet fuel from the SI Facility is piped to the Airport Facility approximately 1.5 miles west of the SI Facility, via underground pipeline crossing Ke'ehi Lagoon.

In January of 2015, a leak in the bottom of Tank 2 released approximately 42,000 gallons of jet fuel into the subsurface soil and groundwater at the Site. Due to the weight of the spilled fuel and tidal fluctuation at the Site, the spilled fuel was not completely contained by the existing slurry wall and a small amount of the spilled fuel migrated offsite towards Ke'ehi Lagoon (ERM 2020). Approximately 32,500 gallons of product was recovered onsite and another approximately 2,000 gallons was recovered offsite.

The offsite migration of the released jet fuel towards Ke'ehi Lagoon revealed that the underground perimeter slurry wall was inadequate to provide an impermeable secondary containment system to effectively contain an uncontrolled release within the boundary of the SI Facility. To mitigate the potential for future spills from reaching Ke'ehi Lagoon, HFFC installed an underground interceptor trench between Lot 2 and Ke'ehi Lagoon in 2016.

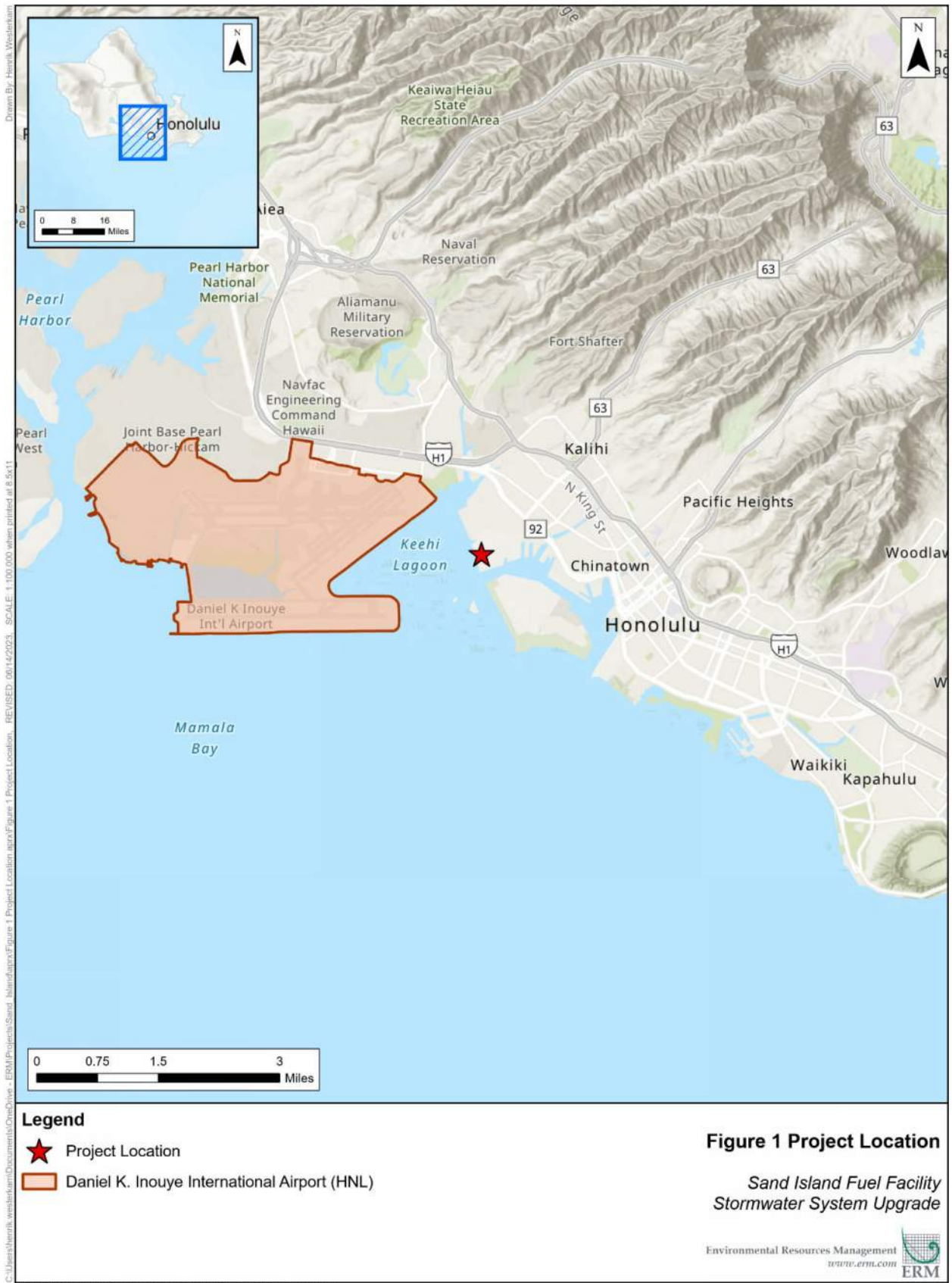


Figure 1 Project Location

*Sand Island Fuel Facility
 Stormwater System Upgrade*



Source: Esri - World Topographic Map; NAD 1983 UTM Zone 4N



2.3 Purpose and Need

Under the Administrative Order on Consent, Docket No. OPA-311-09-2021-001, issued by the United States Environmental Protection Agency (EPA), HFFC and Signature Flight Support, LLC (SFS) are responsible for enhancing the secondary containment of the facility so that it is sufficiently impervious to contain any discharged oil until clean-up can occur. Secondary containment enhancements within the facility will be achieved through the combination of installation of new asphalt pavement sections for drive paths, an industrial spray-on coating for all areas throughout Lots 2, 3, and 3.5, and improvements to the storm drainage system. No modification is needed to the existing dike walls, and enhancement of the secondary containment of the above ground storage tanks with new tank bottoms is underway and scheduled to be complete by 2028. This Environmental Assessment addresses improvements to the storm drainage system and secondary containment of the SI Facility.

Due to the quantity of fuel stored at the SI Facility and the proximity to Ke'ehi Lagoon, an uncontrolled release could cause "Substantial Harm" to the environment¹. The proposed enhancements to the SI Facility are necessary for improving secondary containment systems such that potential impacts to the environment and public health are mitigated in the event of fuel release.

2.4 Project Description

Improvements to the stormwater drainage system at the SI Facility will include installation of approximately 31 collection stormwater drainage inlets, four larger lift stations with sump pumps, and an aboveground oil-water separator (OWS) (see Appendix A – Preliminary Construction Drawings). Eight of the stormwater drainage inlets will be equipped with small sump pumps to pump drainage to the remaining inlets, which will gravity drain to the four larger lift stations. The drainage inlets and lift stations will be connected via a network of above and underground drainage pipes which connect the lift stations to the OWS. The stormwater drainage system will be equipped with multiple mitigative measures to prevent possible inundation of the OWS. Primary mitigation measures consist of oil stop valves (OSV) installed at catch basins nearest each larger lift station to control localized spills to each quadrant of the site. Secondly, the OWS will have integral controls and high-level oil alarms that will automatically shut off the lift station pumps and close the OWS effluent valve. Lastly, the OWS will have an integral hydrocarbon sensor to shut off the entire system should the OWS itself fail.

The effluent of the OWS will be connected to a new sampling structure located outside the containment wall but inside the facility fenced area. This sampling structure will serve as a location for annual testing of the stormwater discharge by public entities. The effluent from the sampling structure will then continue to an existing storm drainage inlet in the graveled parking area on the west side of the SI Facility. HFFC will acquire a 10- by 100 -foot easement from the Department of Land and Natural Resources (DLNR) to facilitate construction and installation of the drainage pipe connecting the sampling structure and the existing storm drainage inlet.

Minor grading of the Site will be required to direct the flow of stormwater to the catch basin inlets. Excavated soil during construction will be tested and re-used where possible or properly disposed. The maximum depth of ground disturbance at the Site is estimated to be 5 feet below ground surface during installation of the lift stations. Following completion of improvements to the stormwater drainage system, an asphalt liner and industrial spray coating will be applied to the ground of the SI Facility, thereby increasing the imperviousness of the site surface.

¹ 40 CFR Appendix C to Part 112 – Substantial Harm Criteria. A facility that has the potential to cause substantial harm to the environment in the event of a discharge must prepare and submit a facility-specific response plan to EPA. The SI Facility is in compliance with this requirement.

The proposed enhancements will not lead to an increase in fuel storage capacity at the Site. The Project will require Special Management Area Permit approval and a Building Permit from the City and County of Honolulu Department of Planning and Permitting (DPP), and coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. The work will commence following issuance of permits and is anticipated to take 18 months to complete. Prior to project completion, HFFC will update the SI Facility NPDES permit to operate, as well as revise the Spill Prevention, Control, and Countermeasure, Stormwater Pollution and Prevention Plan (SWPPP), and Facility Response Plan to reflect the improvements at the Site.

2.5 Public Involvement and Agency Coordination

2.5.1 Environmental Protection Agency

The EPA was consulted during the development of alternatives for improving the secondary containment system and stormwater discharge operations at the SI Facility and approved the proposed Project as documented in Administrative Order on Consent No. OPA-311-09-2021-001 signed May 2021.

2.5.2 Department of Land and Natural Resources

Outreach with DLNR with commenced on 11 May 2018, during which the Project was introduced to Finn McCall, Engineering Branch, Division of Boating and Ocean Recreation. The discussion also addressed the request for a Right of Entry Agreement or Grant of Non-exclusive Easement to allow HFFC and its contractors to access DLNR property to install and maintain on DLNR property the discharge pipe from the Facility to the existing stormwater inlet. During subsequent correspondence, it was identified that DLNR's primary concern was the potential for a discharge of stormwater from the HFFC Facility to flood the adjacent parking lot if the outfall to the Ke'ehi Lagoon became blocked. HFFC clarified that the discharge would be conducted manually, and that a procedure would be noted in operational documents for the stormwater system for operating personnel to halt the discharge and notify proper personnel should a backup be observed. For the initial discharge of stormwater, a flowrate of approximately 3,000 gallons per minute (gpm) for 5 minutes is anticipated followed by a steady flow rate of 600 gpm. The frequency of discharge from the stormwater system was identified as 4 to 6 times per month, with a peak of 8 times during wet months based on historical averages. The average discharge would be 6 to 12 hours in duration, and it was estimated that a 10-year storm event could take 42 hours (2 days) to drain. DLNR also enquired about the status of approval by DOH of requisite plans. On 16 April 2021, HFFC was verbally informed that DLNR is okay with the flow rates and frequency of discharge. A Right of Entry Agreement or Grant of Non-Exclusive Easement has yet to be issued.

2.5.3 Kalihi-Palama Neighborhood Board No. 15

The Kalihi-Palama Neighborhood Board No.15 was consulted during a neighborhood meeting prior to the development of this Environmental Assessment. The community was informed of the Consent Agreement and Final Order issued by the EPA and proposed scope of work. Burns & McDonnell received a letter of support from the neighborhood board in November 2022, expressing their understanding of the need for this Project and their support (Appendix B). Burns & McDonnell have agreed to provide status updates regarding the installation of the asphalt liner and industrial spray, and to inform the neighborhood board of any incidents during installation whereby the surrounding environment is affected as requested in the letter in support of the Project.

3. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

3.1 Physical Environment

3.1.1 Climate

The SI Facility is in a region with a mild semitropical climate, characterized by “mild temperatures throughout the year, moderate humidity, persistence of northeasterly trade winds, significant differences in rainfall within short distances, and infrequent severe storms” (National Weather Service 1983). The average yearly rainfall ranges from approximately 25 to 30 inches, with a tendency to be heaviest between October and April.

3.1.2 Geology, Soils, and Geologic Hazards

The SI Facility is located on the Southern coastal plain of O’ahu and is adjacent to Ke’ehi Lagoon Small Boat Harbor. The plain is on eroded flanks of the Koolau Volcano. Land reclamation projects, including dredging operations, have transformed the area over many years into its current state.

The Site is flat, ranging from approximately 0 to 5 feet above mean sea level. The U.S. Department of Agriculture, Soil Conservation Service, classifies this land as “Fill Land, Mixed”, Class C. The geology at the SI Facility can generally be divided into three layers. The uppermost layer consists mostly of alluvium, such as silt, gravel, clay, and sand, to a depth of about 4 to 6 feet. Underneath this layer is loose lagoon deposits and gravel (silty and clayey), to a depth of about 20 feet. From approximately 20 to 25 feet in depth is a layer of hard coral. Water drains slowly through the soil due to its high density, porosity, and permeability. The Site is located within a tsunami inundation zone; an earthquake on or near Hawai’i Island would be the most likely cause of a local tsunami on O’ahu. Tsunamis could also be generated by distant earthquake events. Tsunami alerts are issued in Hawai’i by the Pacific Tsunami Warning Center using HNL.INFO, social media, mobile phone alerts, outdoor sirens, National Oceanic and Atmospheric Administration (NOAA) weather radio, and TV/radio based on four levels of alert: warning, advisory, watch, and information statement (City and County of Honolulu 2022).

Potential Impacts and Mitigation Measures

The underlying soil and geology at the site do not present any geologic hazards that require mitigation as part of the Project. No impacts as a result of geology and soil are anticipated and therefore no mitigation measures are proposed. The Project is located in a tsunami inundation zone; as tsunami alerts are issued in Hawai’i by the Pacific Tsunami Warning Center, no additional mitigation measures are required.

3.1.3 Hydrology, Flood Zone, and Sea Level Rise

According to Mink and Lau (1990), the groundwater in the area is within the Kalihi aquifer systems in the Honolulu Aquifer Sector with unconfined, basal hydrology and sedimentary soil (Aquifer Code 30103116) and confined, basal flank soil (Aquifer Code 30103121). The groundwater water table at the Site is a basal, unconfined sedimentary aquifer approximately 4 to 6 feet below ground surface and influenced by tidal fluctuations. The aquifer below the Site is not a source for drinking water and is not considered ecologically important. It has moderate salinity, is considered replaceable, and is highly vulnerable to contamination.²

² Basal is used to describe freshwater encountering seawater. An unconfined aquifer is an aquifer whose upper water surface (water table) is at atmospheric pressure and can rise and fall. A confined aquifer is bounded by impermeable or poorly permeable formations, causing it to be under pressure (Mink and Lau 1990).

Currently, the SI Facility has a NPDES permit (HI R80G838) although it does not discharge any stormwater outside of the SI Facility boundary. Infiltration and evaporation are primarily used in the existing containment area for removing stormwater onsite. While the SI Facility is near the shoreline of Ke'ehi Lagoon, onsite operations do not impact the water quality of Ke'ehi Lagoon.

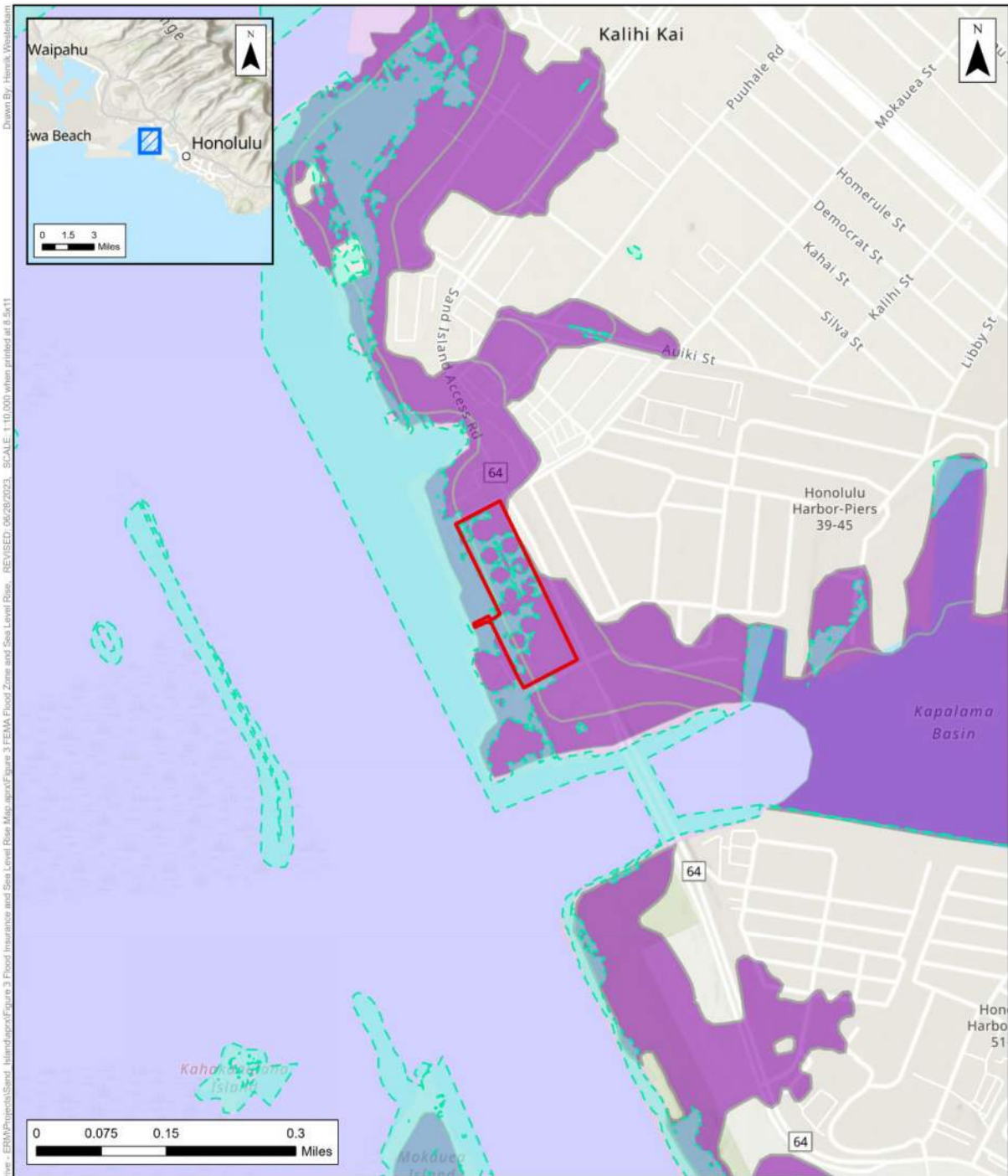
The Site is located in an area designated by the National Insurance Flood Program as Special Flood Hazard Area Zone AE, a high flood hazard district subject to inundation by 1 percent annual chance of flood (i.e., the 100-year flood zone) (Figure 3). Insurance requirements for this zone do not apply to the SI Facility as it is not a walled and roofed structure. The Site is also subject to sea level rise and is within the modeled benchmark scenario of 3.2 feet of sea level rise by the end of the century based on passive inundation, coastal erosion, and annual high wave runoff (Figure 3).

Sea level rise guidance issued by the City and County of Honolulu Climate Commission in 2018 establishes 3.2 feet of sea level rise as the planning benchmark for most development and considers 6 feet of sea level rise as a planning benchmark for critical infrastructure with expected long lifespans and low risk tolerance (Courtney et al., 2020). The Climate Change Effects chapter of the City and County of Honolulu Multi-Hazard Pre-Disaster Mitigation Plan recommends that City government should plan and determine how to execute public works to protect existing critical facilities and infrastructure and vital economic assets at risk to climate change effects, calling for public works planning and preliminary engineering feasibility studies for options for various locations with developed assets that are not economically feasible to abandon or relocate, including Sand Island access (City and County of Honolulu 2020).

Potential Impacts and Mitigation Measures

In June 2021, the Hawaii Department of Health (DOH) issued a memorandum discussing concerns posed by climate change and sea level rise on contaminated lands in coastal areas of Hawaii, including petroleum-impacted sites similar to the SI Facility. The memorandum identifies potential impacts of sea level rise to human health and the environment, provides recommendations on steps to address increased hazards from sea level rise, and solicits input on the development of additional guidance, policies, and regulations. Submersion of petroleum contamination from sea level rise and the presence of impervious surfaces creates a strongly anaerobic environment conducive to methane and hydrogen sulfide gas production in the subsurface soil. This creates a significant health and safety hazard as methane is an explosive compound when mixed with the right proportion of oxygen in the presence of a spark or flame, and hydrogen sulfide is flammable and toxic at low concentrations. DOH recommends considering the implementation of remediation and adding engineering controls to address potential buildup of vapors in the subsurface soil and under structures at petroleum-contaminated sites along the coast (DOH 2021).

To mitigate potential impacts from sea level rise at the SI Facility associated with the buildup of subsurface gas, the Project will include the installation of a passive subsurface venting system via vertical perforated pipe that will allow oxygen into the subsurface to promote aerobic degradation of methane and allow subsurface gases to vent to open atmosphere. This design feature, which is preliminary and subject to DOH approval, will be similar to that installed at the former Shell Honolulu fuel distribution terminal located at 789 North Nimitz Highway, Honolulu (AECOM Technical Services, Inc. 2020).



- Legend**
- Hawai'i Fueling Facilities Corporation Sand Island Fuel Storage Facility
 - Sea Level Rise Exposure Area (3.2 ft SLR)
- FEMA Flood Zone**
- AE (1 percent chance of annual flooding)
 - VE (1 percent chance of annual flooding and additional hazard associated with storm waves)

Figure 3 FEMA Flood Zone and Sea Level Rise

Sand Island Fuel Facility Stormwater System Upgrade



C:\Users\jhernk_waston\Documents\Projects\ERM\Projects\Sand_Island\aprx\Figure 3 FEMA Flood Zone and Sea Level Rise Map.aprx\Figure 3 FEMA Flood Zone and Sea Level Rise Map.aprx
 Drawn By: Herak Waston
 REVISION: 06/28/2023, SCALE: 1:10,000 when printed at 8.5x11

3.1.4 Flora and Fauna

The 8.4-acre Site is within a highly disturbed industrial area approximately 200 feet east of Ke'ehi Lagoon, which is connected to Mamala Bay and the Pacific Ocean. It is in close proximity to navigable waters and entirely within the SMA.

A biological resource desktop review was conducted to assess the biological setting and potential to occur for special-status species and sensitive biological resources. This analysis was conducted by reviewing a 5-mile search radius of applicable databases including:

- U.S. Fish and Wildlife Service's Information, Planning, and Conservation System (IPaC) database
- U.S. Fish and Wildlife Service, Pacific Islands Office Critical Habitat database
- The Division of Forestry and Wildlife's threatened and endangered plant species maps

Based on the desktop review, no threatened and endangered species have potential to occur within the Project Site and there is no overlapping U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration (NOAA) designated Critical Habitat.

A field-based survey of the Project Site and Biological Survey Area (Figure 2) was conducted on 12 May 2023. Terrestrial flora found at the Project Site include common native and introduced species associated with highly disturbed ruderal areas. These include:

- Shepherd's needles (*Biden alba*)
- Indian marsh fleabane (*Pluchea indica*)
- Saltgrass (*Distichlis spicata*)
- Bur bristlegrass (*Setaria adhaerens*)
- Coastal sandalwood (*Santalum ellipticum*)
- Saltwort (*Batis maritima*)
- White leadtree (*Luecaena leucocephala*)
- Bitter melon (*Momordica charantia*)
- Kerosene tree (*Cordia subcordata*)
- White bougainvillea (*Bougainvillea glabra* 'alba')
- Rubber vine (*Cryptostegia grandiflora*)
- Singapore plumeria (*Plumeria obtuse*)
- Prostrate globe-amaranth (*Gomprena celosioides*)
- Sea purslane (*Sesuvium portulacastrum*)
- Fringed passionflower (*Passiflora sp.*)
- Swollen fingergrass (*Chloris barbata*)
- Rattlebox (*Sesbania punicea*)
- Red mangrove (*Rhizophora mangle*)
- Seaside heliotrope (*Heliotropium curassavicum*)
- Croton gold dust (*Codiaeum variegatum*)

- Catsear (*Hypochaeris radicata*)
- Several ornamental tree species

There were no onsite observations within the Biological Survey Area (Figure 2) of plant species considered to be sensitive or listed threatened or endangered, or otherwise considered to be rare or special by the State of Hawai'i or federal government.

Terrestrial fauna observed within the Biological Survey Area include the following species:

- Common Myna (*Acridotheres tristis*)
- House finch (*Haemorhous mexicanus*)
- House sparrow (*Passer domesticus*)
- Java sparrow (*Padda oryzivora*)
- Rock pigeon (*Columba livia*)
- Spotted dove (*Spilopelia chinensis*)
- Zebra dove (*Geopelia striata*)

Common transient seabirds may be present along the shoreline and boat harbor areas; however, the Project Site and adjacent shoreline are not characteristic of quality nesting habitat. Cats and rodents may also inhabit the area based on the location of adjacent lots, areas, and the Ke'ehi Lagoon Boat Harbor.

Potential Impacts and Mitigation Measures

As no threatened and endangered species were identified as having potential to occur within the Project Site and there is no overlapping U.S. Fish and Wildlife Service or NOAA designated Critical Habitat, no impacts to special-status species are anticipated as a result of the Project. Furthermore, the work is being performed within a disturbed industrial site that is currently operational. No mitigation measures are proposed.

3.1.5 Air Quality

The State maintains three air monitoring stations on Honolulu, one of which is on Sand Island approximately 1.6 miles southeast of Ke'ehi Harbor and the Project Site. Air quality in the area of the proposed Project is generally good according to the U.S. Air Quality Index (AQI) standards. The AQI readings are aggregated from the main pollutants found in the air, both in Honolulu and worldwide, with ones such as nitrogen dioxide, sulfur dioxide, ozone, carbon monoxide, and the two main forms of fine particles, PM_{2.5} and PM₁₀ being used to calculate the overall U.S. AQI reading. Air quality on Honolulu is primarily affected by fumes and emissions given off by vehicles, including motor vehicles travelling on nearby roads and aircraft activity at the nearby HNL approximately 1.5 miles west from the Project Site, across Ke'ehi Lagoon. Other sources of air pollution would be emissions from the Honolulu power plant approximately 1.9 miles southeast of the Project area and natural volcanic emissions causing volcanic smog from Kilauea on the island of Hawai'i. Volcanic smog concentrations are primarily dependent on the amount of volcanic gases emitted from a volcano, the distance from the source vent, and the wind direction and conditions on a given day.

Potential Impacts and Mitigation Measures

Construction activities will result in short-term impacts to air quality. Construction activities may temporarily increase emissions related to the use of construction vehicles and equipment. Preparation of the construction site, ground disturbance, grading, and building and construction will likely create short-

term particulate emissions. Implementation of best management practices (BMPs) will minimize construction-related impacts in the vicinity of the Site. All construction activities will be in compliance with the Department of Health Hawai'i Administrative Rules (HAR) Title 11, Chapter 59, Ambient Air Quality Standards and the requirements of HAR §11-60.1-33, Fugitive Dust. Construction equipment will utilize technology and standards that meet State and Federal air quality requirements. The Project will not result in any changes to the operation of the SI Facility, therefore long-term impacts on air quality are not anticipated.

3.1.6 Noise

Ambient noise level in the Project area is consistent with an urban setting and predominantly influenced by the combined noise levels of vehicular traffic travelling on public roads, recreational activity at the nearby harbor and marina, and human activities related to the various nearby commercial uses along the shoreline of Ke'ehi Boat Harbor adjacent to the Project Site and the Honolulu Harbor and associated shipping yards east of the Project Site. Other ambient noise is associated with aircraft overflight connected to HNL approximately 1.5 miles west of the Project Site, across Ke'ehi Lagoon. No sensitive receptors are located in close proximity to the Project Site.

Impacts and Mitigation Measures

The Project may result in audible noise impacts in localized areas generated by construction vehicles, heavy equipment, and impact tools not generally associated with daily operations at the Project Site and may affect neighboring properties. However, construction noise will be temporary and short-term, and no sensitive receptors are in proximity to the Project Site. Mitigation of Project-related activities to inaudible sound levels will not be practical due to the nature of planned Project activities and equipment to be used. The ambient noise will periodically increase in the proximity of the Project work areas due to the necessary operation of construction equipment (e.g., trucks, equipment, generators, compressors, etc.). Temporary construction-related increases in sound levels will cease upon the completion of the Project.

The Project will comply with DOH Administrative Rules, Title 11, Chapter 46 "Community Noise Control" regulations. The DOH Community Noise Rule specifies that the maximum permissible sound level in industrial areas is 70 decibels (dBA) during both daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.), at or beyond the property line. Noise levels are not to exceed 70 dBA more than 10 percent of the time within any 20-minute period, and the maximum permissible sound level for impulsive noise is 10 dBA above the maximum permissible sound level (i.e., 80 dBA). In cases where the construction sound level exceeds or is expected to exceed the DOH's maximum permissible noise levels, the contractor will obtain a noise permit from the DOH. Additionally, the contractor will obtain a Community Noise Variance from the DOH should construction be required during the variance hours defined as starting before 7:00 a.m. and after 6:00 p.m., Monday through Friday, or before 9:00 a.m. and after 6:00 p.m. on Saturdays, or at any time on Sundays and holidays. It will be the contractor's responsibility to obtain the permit and comply with the permit conditions.

3.1.7 Scenic Resources

The Project Site is located in an industrial area adjacent to the Ke'ehi Lagoon and the Ke'ehi Boat Harbor. Partial views of the mountains of Keaiwa Heiau State Recreation Area to the north are obstructed by power lines, utility poles, and storage tanks. The view to the east is generally obstructed by storage tanks and allows for only a partial view of the mountains of the Kalihi Valley. To the east of the Project Site is the Sand Island Access Road and the Kapalama Container Terminal. The Project Site does not contain any sites that are considered significant for their scenic character in the O'ahu General Plan. Representative photos of the site and surrounding area are provided below.

Potential Impacts and Mitigation Measures

There are no anticipated impacts on visual resources after completion of the Project. The Project does not propose the building, installation, or construction of any structure that would change the existing view plane. No significant short-term or long-term impacts on visual resources are anticipated during construction of the proposed Project as all proposed work will occur at surface or subsurface level.



Photo 1. View to the north outside of the west side of the SI Facility.



Photo 2. Obstructed view to the west toward Ke'ehi Harbor from inside the SI Facility.



Photo 3. View to the west toward Ke'ehi Harbor.



Photo 4. View to the south outside of the west side of the SI Facility.



Photo 6. View to the east from outside of the west side of the SI Facility obstructed by tanks.

3.1.8 Hazardous Substances, Toxic Waste, and Hazardous Conditions

The SI Facility has a total of 16 ASTs for storing jet fuel. In addition, there are underground pipelines transferring jet fuel from Pier 51 crossing the Kalihi Channel, and from the SI Facility to HNL crossing Ke'ehi Lagoon (ERM 2021). Jet fuel is a hazardous, combustible liquid containing ingredients such as kerosene, benzene, and toluene. Jet fuel is classified by the Department of Transportation as Class III Packing Group III, a flammable liquid with a flash point between 23 and 60 degrees Celsius (73 to 140 degrees Fahrenheit). When released into the environment, jet fuel can contaminate soil, groundwater, and waterways. It is toxic to aquatic organisms and humans, with the potential to cause organ damage, irritation, and other health hazards. Unless the jet fuel is contaminated or changed, it is not considered hazardous waste if properly disposed (ERM 2020).

There has been one reported significant leak at the Site. During this release in 2015, approximately 42,000 gallons of jet fuel leaked from the bottom of Tank 2. While the majority of the jet fuel was contained within the property boundary of the SI Facility, some of the released jet fuel migrated below the underground perimeter slurry wall and towards Ke'ehi Lagoon. The Pipeline and Hazardous Material Safety Administration issued a Notice of Proposed Safety Order (Reference No. CPF 5-2015-6002S) after the 2015 spill. The safety order outlined requirements that HFFC needed to incorporate at the Site to prevent future spills, such as upgrading tanks and inventory control procedures (ERM 2023). As part of the updated *Spill Prevention, Control, and Countermeasure Plan*, response procedures were developed to protect the environment and public health in the event of another significant release.

During construction of the Project, hazardous substances used onsite will be limited to fuel and lubricants for construction equipment.

Potential Impacts and Mitigation Measures

Implementation of the stormwater system upgrade will improve secondary containment measures at the SI Facility and minimize the potential for a future hazardous spill to migrate offsite should one occur. During construction activities, the contractor will be required to comply with all applicable State regulations regarding work with hazardous materials. No additional mitigation measures are required.

3.2 Socioeconomic and Cultural

3.2.1 Socioeconomic

The approximate population for the Kalihi-Palama area in 2021 was 39,966 and the median household income was \$54,524, based on the City and County of Honolulu DPP Annual Report on the Status of Land Use on O'ahu for Fiscal Year 2021. In 2021, the total amount of housing units in Kalihi-Palama was 5,083. The predominant race is Asian alone (~62 percent), followed by Native Hawai'ian and Other Pacific Islander alone (~20 percent), and two or more races (12 percent) (City and County of Honolulu DPP).

Potential Impacts and Mitigation Measures

The Project will have a beneficial effect on the economic and social welfare by providing short-term construction employment. The Project is not expected to have a long-term impact on the socioeconomic characteristics of the Kalihi-Palama District as there will be no long-term increase in employment at the SI Facility. Additionally, the Project will neither add nor remove housing. The proposed work will help protect the health characteristics of Kalihi-Palama District by improving containment systems and preventing potential adverse impacts to human and environmental health.

3.2.2 Cultural and Historic Resources

A topographic map from 1928 shows the location of the SI Facility to be offshore in the waters of what is now the Ke'ehi Boat Harbor, indicating it is located west of the original shoreline. This area is unlikely to contain cultural resources as it is man-made land that was created using dredged material from the nearby ocean. Five fishing ponds are depicted on the 1928 map with the closest to the SI Facility being either Auiki Pond or Ananoho Pond; however, both of these ponds were filled during World War II and an Army port and warehouse complex was built over. As the SI Facility is west of these ponds, excavations for the Project will not pose a risk to the pond walls if they are still intact.

The SI Facility is first depicted on land in 1953, suggesting that it is located on land that was created by reclamation projects that enlarged "Sand Island". One of these reclamation projects included the creation of a seaplane channel immediately west of the SI Facility. Aerial imagery from the period does not depict any permanent structures on the newly created land and the area appears sandy. In contrast, by 1968, the area had been industrialized and a recreational pier as well as storage tanks are immediately obvious in the surrounding area. This trend continues and intensifies up to the modern day with the SI Facility currently surrounded by paved areas, suggesting the original soil horizon has been thoroughly disturbed and historic-era cultural resources are unlikely to occur. Additionally, a field inspection for the creation of a shipyard immediately west of the SI Facility in 2006 included a Site visit that recorded soils as fill and the surrounding area as thoroughly impacted. Any non-paved soils were recorded as fill with some coral noted. Similarly, the Environmental Impact Statement for Kapalama Container Terminal Project 50 feet east of the Facility came to a similar conclusion, noting that archaeological studies in the surrounding area have had limited results with major finds located along the pre-contact coastline.

As the Facility is located west of the pre-contact shoreline and currently consists of fill with much of the area covered with pavement, a cultural survey of the area will not provide any additional insight into the surrounding area or potential impacts of the proposed work activities. As such, in accordance with HAR §13-284-5, a letter was submitted to the State Historic Preservation Division (SHPD) on 5 June 2023 requesting concurrence from SHPD that the Project will have no historic properties affected and a cultural survey is not required (Appendix C). The response from SHPD will be submitted to DPP upon receipt.

Potential Impacts and Mitigation Measures

There are no known historic or cultural resources at the Project Site and the location is unlikely to contain cultural or historic resources as it is man-made land that was created using dredged material. Nonetheless, in the unlikely event that any cultural or historic remains or other potentially significant subsurface resources are encountered, HFFC will require its contractor to immediately halt construction activities and notify SHPD of the discovery.

3.3 Infrastructure

3.3.1 Utilities

Electrical service is currently provided to the Site by the Hawai'iian Electric Company. Potable water is provided by the Honolulu Board of Water Supply. The SI Facility Response Plan developed by ERM states that liquid waste or wastewater generated during a spill recovery operation, will be transported for recycling at the HFFC Airport Facility with approval from the DOH.

Recovered wastewater generated during water drawdown at the SI Facility is transferred to the HFFC Airport Facility and discharged into an underground OWS. The OWS effluent discharges into two holding tanks (Tank 111 or 113) and is treated through bioremediation using a submersible aerator system. The wastewater is tested for contaminants prior to discharging it into an underground injection well, in

compliance with the HFFC Underground Injection Control Permit. The recovered fuel from the OWS is collected into Tank 114 to be sold as “off-spec” fuel to local vendors.

Small amounts of non-combustible solid waste generated during spill recovery operation and remediation, is stockpiled onsite for aeration. The solid waste is tested prior to disposal or re-use onsite. Disposal of fuel-impacted soil during a significant spill recovery operation is arranged thru Pacific Environmental Corporation who serves as the Oil Spill Removal Organization for HFFC.

Potential Impacts and Mitigation Measures

No new utilities will be required at the Site and no adverse impacts to the existing utilities are anticipated; therefore, no mitigation measures are prescribed.

3.3.2 Roads and Parking

The SI Facility is primarily accessed via Sand Island Access Road or Hawai'i Route 64, a state-owned, north-south, four-lane road that stretches from Nimitz Highway (Hawai'i Route 92) to the entrance of Sand Island State Recreation. The posted speed limits at Sand Island Access Road range from 25 to 35 miles per hour. As of 2019, the Hawai'i Department of Transportation measured the average daily traffic count at the Sand Island Access Road at approximately 19,000 vehicles (Innergex Renewable Energy 2021).

Access to the SI Facility is limited to authorized personnel only. Visitors to the Site are required to be escorted at all times and contractors doing work at the Site are required to have a Transportation Worker Identification Credential card. The SI Facility parking lot is in the northeast corner of Lot 2 adjacent to the SI Facility's main entrance.

Potential Impacts and Mitigation Measures

The proposed storm drainage system upgrade at the SI Facility may temporarily increase traffic on Sand Island Access road due to construction vehicles and equipment accessing the Project Site. No long-term impacts to traffic will occur as the storm drainage system upgrades will not affect operations at the SI Facility. No mitigation measures are prescribed.

3.4 Secondary and Cumulative Impacts

Secondary impacts of a project are indirect effects on the environment, such as population growth or change in land use, that may occur in the foreseeable future. Cumulative impacts occur when the individually limited impacts from past, present, and future local projects combine to have collectively significant impact.

No secondary impacts or cumulative impacts are anticipated as the work will be performed at an existing facility and is limited to enhancing the existing secondary containment and stormwater drainage systems without an increase in the fuel storage capacity. As noted above, enhancement of the secondary containment of the tanks at the SI Facility is underway and scheduled to be complete by 2028, consistent with the Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the EPA. A search of the City and County of Honolulu DPP website on 15 June 2023 for projects open for public input did not identify any projects in the vicinity of the SI Facility, although there are plans to pave the parking lot at the Ke'ehi Small Board Harbor at some point in the future.

Personnel performing the proposed work will be from the local area or other parts of Hawai'i. This work will not change the intended function of the SI Facility, nor include or promote construction of new housing units or businesses. Therefore, the Project is not expected to cause any long-term increases in population or traffic in the area.

4. POSSIBLE ALTERNATIVES

4.1 No Action

A “No Action” alternative would mean that no improvements are undertaken at the SI Facility. This alternative would not help to improve the existing stormwater drainage systems and secondary containment facilities. Without improvements, the SI Facility will continue to pose a potential threat to wildlife, natural resources, and public health. Additionally, the HFFC and SFS would fail to comply with the agreed-upon actions outlined in the Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the EPA. By violating the terms of agreement in the Consent Agreement, the HFFC and SFS may be subject to civil penalties per day of violation following the day performance is due.

4.2 Slurry Wall Improvements

The slurry wall improvements alternative would involve improving the existing underground slurry containment wall at the SI Facility that is part of the Spill Prevention, Control, and Countermeasure Plan for the Site. The slurry wall is a vertical hydraulic barrier made up of concrete mix with bentonite suspension, and improvements would need to comply with standards for depth and Quality Assurance/Quality Control as provided in the Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the EPA. The optimum depth for the upgrade would be based on geological data of the Site, the existing slurry wall design, and subsurface geotechnical information. A treatability study specific for the Site would determine the best mixture ratios of concrete, bentonite, and reagents (if any). Additionally, implementation of the slurry wall upgrade would require defining any subsurface, aerial, or access interferences. Other considerations that could impact the alignment or construction of the wall include presence of utilities, bedrock or irregular surfaces, existing cap impacts, and waste soil and water management and disposal requirements.

This alternative was proposed to the EPA; but after thorough consideration, it was not selected due to potential complications during construction.

4.3 Stormwater System Upgrades (Preferred Alternative)

The proposed Project consists of upgrading the stormwater system through the installation of an asphalt liner on roads used for driving and industrial coating on all other areas throughout Lots 2, 3, and 3.5, and installing improvements to the storm drainage system at the SI Facility. The Project complies with the Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the EPA.

5. REQUIRED PERMITS AND APPROVALS

5.1 City and County of Honolulu

Permit/Approval	Agency
Building Construction Permit	Department of Planning and Permitting
Special Management Area Use Permit	Department of Planning and Permitting
Electrical Permit	Department of Planning and Permitting
Mechanical/Plumbing Permit	Department of Planning and Permitting
Civil Engineering Branch (CEB) Plan Review	Civil Engineering Branch
Grading Permit	Civil Engineering Branch
Site Development Permit	Civil Engineering Branch
Stockpiling Permit	Civil Engineering Branch

5.2 State of Hawai'i

Permit/Approval	Agency
Community Noise Permit	Department of Health
Construction Environmental Hazard Management Plan approval	Department of Health
Subsurface Aeration & Ventilation approval	Department of Health
C-EHMP	Department of Health Hazard Evaluation and Emergency Response Office
Sea Level Rise Certification	Department of Health Hazard Evaluation and Emergency Response Office
DCAB	Department of Health Disability and Communication Access Board
Stormwater Management Plan: Construction Site Runoff Control Program	Department of Transportation Airports
Construction Connection Discharge Surface Runoff Permit	Department of Transportation Airports
Design Review Checklist – Projects Greater Than One Acre	Department of Transportation Airports
Tenant Improvement Plan Approval/Permit to Perform Work on State Airport Property	Department of Transportation Airports

5.3 Federal

Permit/Approval	Agency
FAA 7460 Notifications	Federal Aviation Administration
FAA 7460 Notifications - Construction	Federal Aviation Administration
Construction Stormwater General Permit	National Pollutant Discharge Elimination System c/o DOH Clean Water Branch
General Permit Authorizing Discharges Associated with Construction Activity Dewatering	National Pollutant Discharge Elimination System c/o DOH Clean Water Branch

6. CONSISTENCY WITH GOVERNMENT PLANS AND POLICIES

6.1 Hawai'i State Plan

The Hawai'i State Planning Act, Hawai'i Revised Statute (HRS) §226-3, provides a guideline for the long-range development of the state. The plan was adopted in 1978 and was most recently amended in 1991. The theme of the plan involves three overarching principles: individual and family self-sufficiency, social and economic mobility, and community or social well-being. This Project is in alignment with the goals and objectives of the Hawai'i state plan by improving upon facility objectives to protect environmental well-being and public health.

6.2 O'ahu General Plan and Zoning

The O'ahu General Plan is a comprehensive policy document outlining the city's objectives and policies for the long-range development of the island. The most recent version was adopted in December 2021. It is divided into 11 subject areas based on public needs and governmental functions and aims at helping decision making regarding land use and development. Based on the proposed scope of work, the following sections are most applicable:

Natural Environment and Resource Stewardship, Objective A, Policy 6: "Design and maintain surface drainage and flood-control systems in a manner which will help preserve natural and cultural resources."

Natural Environment and Resource Stewardship, Objective A, Policy 7: "Protect the natural environment from damaging levels of air, water, carbon, and noise pollution."

The SI Facility is in land designated as Waterfront Industrial District (I-3) by the County. This designation includes facilities that are necessary for the efficient operation and performance of port functions, as stated in Sec. 21-3.130 of the Honolulu Code of Ordinances.

6.3 Hawai'i State Land Use Law

As stated by the State Land Use Commission, pursuant to HRS §205-2, there are four land use categories in the state of Hawai'i: Urban, Rural, Agricultural, and Conservation. The SI Facility is located on land designated as a State Urban District (Hawai'i Statewide GIS Program 2022). Urban land districts are currently in urban use and are expected to have urban growth in the future. The surrounding area is developed and predominantly industrial use. The Project is in alignment with this land use designation and there are no proposed changes to the current land use.

6.4 Hawai'i Coastal Zone Management Program

Hawai'i's Coastal Zone Management (CZM) Program, established pursuant to Chapter 205A, HRS, as amended, is administered by the State of Hawai'i, Office of Planning and Sustainable Development. The CZM Act involves a system of permits, including the SMA use permit, to manage development within coastal areas and encourage public participation. For the City and County of Honolulu, the SMA permit process is administered by the Department of Planning. The CZM program outlines management objectives centered around 10 areas: 1) Recreational Resources; 2) Historic Resources; 3) Scenic and Open Space Resources; 4) Coastal Ecosystems; 5) Economic Uses; 6) Coastal Hazards; 7) Managing Development; 8) Public Participation in Coastal Management; 9) Beach Protection; and 10) Marine Resources. All lands within the State of Hawai'i fall within the CZM area. As described below, the proposed Project is consistent with several of the objectives of the CZM program.

Recreational Resources

Objectives. Provide coastal recreational opportunities accessible to the public.

Policies. Improve coordination and funding of coastal recreational planning and management; and Provide adequate, accessible, and diverse recreational opportunities in the CZM area by:

- i. Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
- ii. Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;*
- iii. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
- iv. Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
- v. Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*
- vi. Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*
- vii. Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*
- viii. Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of Section 46-6.*

While the SI Facility is within the SMA, it is not a recreational resource, and the secured facility is not accessible to the public. The proposed Project will not affect access to surrounding recreational opportunities within the SMA, including the Ke'ehi Lagoon and Small Boat Harbor. Improvements to the stormwater system address potential sources of pollution and is therefore consistent with recreational objectives.

Historic Resources

Objectives. Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies. Identify and analyze significant archaeological resources;

Maximize information retention through preservation of remains and artifacts or salvage operations; and

Support state goals for protection, restoration, interpretation, and display of historic resources.

No known historic resources would be endangered by the Project. Burns & McDonnell shall require its subcontractor to comply with all State and County rules and laws pertaining to historic preservation.

Construction activities will be halted and SHPD will be notified in the event any unanticipated archaeological or historic sites are encountered.

Scenic and Open Space Resources

Objectives. Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies. Identify valued scenic resources in the coastal zone management area;

Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

Encourage those developments that are not coastal dependent to locate in inland areas.

The Project involves upgrading a stormwater system within an existing fenced industrial facility consisting of work primarily below ground and at ground level. As such, the Project will not diminish coastal scenic view areas or open space resources.

Coastal Ecosystems

Objectives. Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies. Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

Improve the technical basis for natural resource management;

Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.

The Project is not expected to disrupt or degrade coastal water ecosystems. Burns & McDonnell's subcontractor will be responsible for implementing a stormwater management plan and controlling runoff that can transport loose soil, excess nutrients, and other pollutants. A NPDES permit will be required to comply with BMPs during construction.

Economic Uses

Objectives. Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies. Concentrate coastal dependent development in appropriate areas;

Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

- i. Use of presently designated locations is not feasible;*
- ii. Adverse environmental effects are minimized; and*
- iii. The development is important to the State's economy.*

The Project involves upgrading an existing stormwater system within an existing industrial site and does not involve new coastal development; therefore, the policies pertaining to coastal economic development do not apply.

Coastal Hazards

Objectives. Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Policies. Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;

Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

Prevent coastal flooding from inland projects.

Coastal hazards are not expected to be exacerbated by the Project. The Project includes the installation of improved onsite drainage systems that address the quality of stormwater leaving the Site, which would help to reduce nonpoint source pollution.

Managing Development

Objectives. Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policies. Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development; Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

The Project does not impact or influence the development review process. The environmental review process includes opportunities for public participation and comments pertaining to a variety of issues and topics including coastal resources and hazards.

Public Participation

Objectives. Stimulate public awareness, education, and participation in coastal management.

Policies. Promote public involvement in coastal zone management processes;

Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and

Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

The environmental review process provides public participation opportunities.

Beach Protection

Objectives. Protect beaches for public use and recreation.

Policies. Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;

Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

Minimize the construction of public erosion-protection structures seaward of the shoreline.

Public access to beach areas will not be affected by the Project. The Project does not involve the construction of erosion-protection structures seaward of the shoreline.

Marine Resources

Objectives. Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Policies. Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

The Project involves improving an existing stormwater system at an industrial facility and does not involve the use or development of marine and coastal resources.

7. DETERMINATION, FINDINGS, AND REASONS

7.1 Anticipated Determination

Based upon information presented in this document, the proposed permitting and construction of the Project will likely have no significant environmental impacts and it is anticipated that the City and County of Honolulu DPP will issue a Finding of No Significant Impact (FONSI). This determination is based upon the 13 Significance Criteria outlined in Title 11 Chapter 200.1-12 HAR 2018, discussed below.

7.2 Findings and Supporting Reasons

1) Irrevocably commit a natural, cultural, or historic resource;

The proposed Project involves improvements and construction with an existing industrial facility and heavily disturbed lands in an existing urbanized area. The Site does not include any critical habitats or native plants and is on a location of filled land where the potential to encounter historic resources is unlikely. Therefore, the Project does not represent an irrevocable commitment of a natural, cultural, or historic resource.

2) Curtail the range of beneficial uses of the environment;

The Project will not curtail the range of beneficial uses of the environment as the Site is currently developed and operational as a fueling facility. The proposed work is limited to upgrading the existing stormwater system at the SI Facility and no expansion of the facility will occur.

3) Conflict with the State's environmental policies or long-term environmental goals established by law;

As stated above in Section 5, the proposed Project does not conflict with the State's environmental policies or long-term environmental goals. Improvement of the stormwater system is in alignment with policies and goals to protect environmental well-being and public health.

4) Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State;

The proposed Project will have a beneficial effect on the economic and social welfare by providing short-term construction employment. No adverse effects on cultural practices of the community and the State are anticipated as no changes are being made to the SI Facility other than improving the stormwater system.

5) Have a substantial adverse effect on public health;

The potential temporary impacts related to noise or air quality during construction will be addressed through construction compliance and BMPs with regards to federal, State, and County requirements. The purpose of improving the stormwater drainage system is to protect water quality and public health.

6) Involve adverse secondary impacts, such as population changes or effects on public facilities;

The Project will have no adverse secondary impacts such as population changes or effects on public facilities. No changes are being made to the existing SI Facility other than improving the stormwater system.

7) Involve a substantial degradation of environmental quality;

The proposed Project is a result of Consent Agreement and Final Order, Docket No. OPA-311-09-2021-001, issued by the EPA requiring enhancements to the SI Facility such that any discharge of oil

will not escape the containment system until clean-up can occur. Therefore, the Project will help to avoid degradation of environmental quality. There may be short-term temporary effects related to noise or air quality during construction with the use of diesel and heavy equipment, but those effects will be mitigated through required BMPs in compliance with federal, State, and County laws.

8) Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions;

The proposed Project involves implementing stormwater improvements at the existing SI Facility in compliance with a Consent Agreement and Final Order issued by the EPA. Construction activities will be temporary and of relatively short duration (18 months), and do not involve a commitment for larger actions.

9) Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat;

The Project Site does not contain any critical habitats for rare, threatened, or endangered species. Construction activities will almost entirely be occurring within the fenced industrial site of the SI Facility. There will be some limited activity outside the fenced facility when installing the pipe extending a distance of approximately 100 feet to a stormwater inlet; however, this work will be occurring within a disturbed area where the surrounding land use is a graveled parking lot.

10) Have a substantial adverse effect on air or water quality or ambient noise levels;

Short-term air quality and ambient noise impacts are anticipated during construction. However, they will be mitigated by dust control measures, mufflers, site management BMPs, and compliance with State, County, and federal requirements. As the purpose of the Project is to improve the existing stormwater system, the Project will minimize the risks of having an adverse effect on water quality.

11) Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

The Project location is the existing HFFC facility, which is in a SMA, within 200 feet of Ke'ehi Lagoon and Small Boat Harbor, and is prone to flooding and sea level rise. The SI Facility has existed at this location since the 1960s and is the sole supplier of jet fuel to the HNL; any interruption in the operation of the SI Facility would significantly impact the domestic and international travel industry and the Hawai'i economy. As discussed in Section 3.1.3, the City and County of Honolulu Multi-Hazard Pre-Disaster Mitigation Plan recommends that City government should plan and determine how to execute public works to protect existing critical facilities and infrastructure and vital economic assets at risk to climate change effects.

12) Have a substantial adverse effect on scenic vistas and view planes, during day or night, identified in county or state plans or studies; or

The Project will not have a substantial adverse effect on scenic vistas or view planes, during day or night, as the proposed improvements are at or below ground level within the fenced facility of the SI Facility, and the pipe extending outside of the fenced facility to the stormwater inlet will be buried.

13) Require substantial energy consumption or emit substantial greenhouse gases.

Construction activities will require the use of vehicles and equipment and may temporarily increase emissions related to the use of construction vehicles and equipment; however, the energy consumption and emissions will be short-term and limited to the duration of work to implement the stormwater improvements.

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APPENDIX A PRELIMINARY CONSTRUCTION DRAWINGS

GENERAL NOTES:

- ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE IN FEET, UNLESS INDICATED OTHERWISE.
- CALLOUTS, COORDINATES, AND DIMENSIONS ARE POINTED TO OR MEASURED TO STRUCTURE CENTER, EDGE OF PAVEMENT, OR OUTSIDE FACE OF FOUNDATION, UNLESS INDICATED OTHERWISE.
- ALL WORK SHALL BE SUBJECT TO INSPECTION BY AUTHORIZED PERSONNEL OF LOCAL AND GOVERNMENT REGULATORY AGENCIES AND THE CONTRACTOR.
- ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND LOCAL AND GOVERNMENT CODES, ORDINANCES, AND REGULATIONS. IN CASE OF CONTRADICTION OR DISCREPANCY BETWEEN REQUIREMENTS, SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR.
- ALL WORK SHALL BE CONDUCTED IN A PROFESSIONAL WORKMANSHIP MANNER USING QUALITY MATERIALS. WORK SHALL CONFORM TO SPECIFICATIONS, UNLESS INDICATED OTHERWISE OR AS DIRECTED BY THE CONTRACTOR.
- WHEN CONSTRUCTION WORK IS RESTRICTED TO BEING PERFORMED WITHIN EASEMENTS, SUBCONTRACTOR SHALL CONFINE WORK WITHIN THE PERMANENT AND TEMPORARY EASEMENTS.
- DRAWING BACKGROUND INFORMATION (STRUCTURES, GRADING, UTILITIES, ETC. SHOWN ON THE DRAWINGS AREA BASED ON SURVEYS PERFORMED BY MERIDIAN ASSOCIATES (OCTOBER 2011). SEE THE REFERENCE DRAWINGS IN THIS SET FOR ADDITIONAL SURVEY INFORMATION.
- THE SUBCONTRACTOR SHALL FIELD-CHECK ALL EXISTING CONDITIONS AND BE THOROUGHLY FAMILIAR WITH THE SITE BEFORE ANY WORK COMMENCES. ANY DISCREPANCIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE CONTRACTOR BEFORE ANY FURTHER WORK COMMENCES.
- IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO FIELD-VERIFY EXISTING STRUCTURES, UTILITIES, AND SURVEY INFORMATION, AND TO TAKE NECESSARY PRECAUTIONS DURING DEMOLITION AND CONSTRUCTION. SUBCONTRACTOR SHALL VERIFY EXISTENCE AND MARK LOCATIONS OF ALL UTILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES, PRIOR TO BEGINNING WORK. SUBCONTRACTOR SHALL CONTACT THE CONTRACTOR AND ALL ASSOCIATED UTILITY COMPANIES AND AGENCIES TO IDENTIFY THE LOCATION OF UTILITIES. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING CONSTRUCTION.
- PRIOR TO CONSTRUCTION, THE SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF OPERATIONAL PLANS. IN THE EVENT AN UNEXPECTED UTILITY OR STRUCTURE INTERFERENCE OR CONFLICT IS ENCOUNTERED DURING CONSTRUCTION, THE SUBCONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONTRACTOR. ANY UTILITY SERVICES OR STRUCTURES DISTURBED BY THE SUBCONTRACTOR'S OPERATIONS SHALL BE RESTORED IMMEDIATELY AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CONTRACTOR.

DEMOLITION NOTES:

- ALL DEMOLITION, WASTE, DEBRIS, AND UNSATISFACTORY MATERIALS SHALL BE DISPOSED OF OFF SITE.
- ANY DAMAGE TO PAVEMENT AREAS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REMOVED AND REPLACED AT NO ADDITIONAL COST TO CONTRACTOR.
- HANDLING AND DISPOSAL OF CONTAMINATED SOIL & WATER SHALL BE IN ACCORDANCE WITH THE SAND ISLAND FUEL FACILITY ENVIRONMENTAL HAZARD MANAGEMENT PLAN (EHMP).
- PAVEMENT DESIGNATED FOR REMOVAL TO SUPPORT PROPOSED CONSTRUCTION SHALL BE SAWCUT FULL DEPTH.

STORM DRAIN AND FORCE MAIN NOTES:

- PIPE AND FITTINGS SHALL BE HIGH DENSITY POLYETHYLENE PIPE (DUCTILE IRON PIPE SIZE) CONFORMING TO ASTM D3035 WITH A MINIMUM PRESSURE RATING OF 125 PSI AT 73.4 DEGREE F AND SHALL HAVE A STANDARD THERMOPLASTIC PIPE DIMENSION RATIO OF DR-17.
- JOINTS SHALL BE HEAT FUSION JOINTS CONFORMING TO ASTM D2620.
- PIPE, PIPE FITTINGS AND APPURTENANCES SHALL BE INSTALLED AT THE LOCATIONS INDICATED. EXCAVATION, TRENCHING, AND BACKFILLING SHALL BE AS SPECIFIED IN SECTION 31 20 01 SITE PREPARATION AND EARTHWORK AND ASTM D2774.
- PIPE SHALL BE CUT IN A NEAT MANNER WITH MECHANICAL CUTTERS. WHEEL CUTTERS SHALL BE USED WHERE PRACTICABLE. SHARP AND ROUGH EDGES SHALL BE GROUND SMOOTH AND LOOSE MATERIAL REMOVED FROM THE PIPE BEFORE LAYING.
- BEFORE LOWERING AND WHILE SUSPENDED, THE PIPE SHALL BE INSPECTED FOR DEFECTS. DEFECTIVE MATERIAL SHALL BE REJECTED.
- HEAT FUSION JOINTS SHALL COMPLY WITH THE MANUFACTURER'S INSTRUCTIONS CONCERNING EQUIPMENT, TEMPERATURE, MELT TIME, HEAT COAT, AND JOINING TIME. FLANGED JOINTS SHALL BE MADE IN COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- AFTER THE PIPE HAS BEEN INSTALLED, JOINTS COMPLETE, AND THE TRENCH HAS BEEN PARTIALLY BACKFILLED, LEAVING THE JOINTS EXPOSED FOR EXAMINATION, THE PIPE SHALL BE FILLED WITH WATER TO EXPEL ALL AIR. THE PIPELINE SHALL BE SUBJECTED TO A TEST PRESSURE OF 100 PSI OR 150 PERCENT IF THE WORKING PRESSURE, WHICHEVER IS GREATER, FOR A PERIOD OF AT LEAST ONE HOUR. THE EXPOSED PIPE, JOINTS, FITTING, AND VALVES SHALL BE EXAMINED FOR LEAKS. VISIBLE LEAKS SHALL BE STOPPED OR THE DEFECTIVE PIPE, FITTING, JOINTS, OR VALVE SHALL BE REPLACED.
- FOLLOW MANUFACTURER'S RECOMMENDATIONS REGARDING LIMITING HDPE PIPE EXPOSURE TO SUN AND AMBIENT TEMPERATURES ABOVE 73°F.

CATCH BASIN NOTES:

- CATCH BASINS (CB) ARE TO BE NYLOPLAST 18" DRAIN BASIN INSTALLED PER MANUFACTURER'S RECOMMENDATION. SEE NYLOPLAST DRAWING NUMBER 70001-110-191 FOR INSTALLATION DETAIL.
- CATCH BASINS (CB) ARE TO BE INSTALLED WITH ANTI-FLOTATION FOOTING AS SHOWN ON NYLOPLAST DRAWING NUMBER 7001-110-142.
- CATCH BASINS (CB) ARE TO BE INSTALLED WITH FLEX STORM SHORT BAG, 18" BOND ADS P/N G218NYFYS.
- SEE DRAWING C-502 FOR MORE DETAILS.

GRADING NOTES:

- PROPOSED ELEVATIONS INDICATED ARE FOR TOP OF FINAL GRADE, PAVEMENT, OR STRUCTURE UNLESS INDICATED OTHERWISE.
- ELEVATION DENOTED AS "MATCH" ARE INTENDED TO MEET EXISTING GRADE ELEVATIONS. CONTRACTOR SHALL VERIFY ELEVATIONS AT TIE-INS AND MATCH POINTS PRIOR TO BEGINNING CONSTRUCTION.
- ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 14, ARTICLES 13, 14, 15 AND 16, AS RELATED TO GRADING, SOIL EROSION AND SEDIMENT CONTROL OF THE REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED, AND SOILS REPORT.
- THE SUBCONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 60.1, "AIR POLLUTION CONTROL".
- THE EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE SUBCONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES ARE SHOWN ON THE PLANS, THE SUBCONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
- ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE SITE.
- THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL GRADING OPERATIONS TO BE PERFORMED IN CONFORMANCE WITH APPLICABLE PROVISIONS OF THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS," AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVISED ORDINANCES OF HONOLULU, AS AMENDED. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.

THE SUBCONTRACTOR SHALL OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE(S) FOR THE FOLLOWING:

- STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES THAT DISTURB ONE (1) ACRE OR MORE, AND
- DISCHARGES OF HYDROTESTING EFFLUENT, DEWATERING EFFLUENT, AND WELL DRILLING EFFLUENT TO STATE WATERS.

IN ACCORDANCE WITH STATE LAW, ALL DISCHARGES RELATED TO PROJECT CONSTRUCTION OR OPERATIONS ARE REQUIRED TO COMPLY WITH STATE WATER QUALITY STANDARDS (HAWAII ADMINISTRATIVE RULES, CHAPTER 11-54). BEST MANAGEMENT PRACTICES SHALL BE USED TO MINIMIZE OR PREVENT THE DISCHARGE OF SEDIMENT, DEBRIS, AND OTHER POLLUTANTS TO STATE WATERS. PERMIT COVERAGE IS AVAILABLE FROM THE DEPARTMENT OF HEALTH, CLEAN WATER BRANCH AT [HTTP://HEALTH.HAWAII.GOV/CWB/](http://health.hawaii.gov/cwb/). THE OWNER/DEVELOPER/SUBCONTRACTOR IS RESPONSIBLE FOR OBTAINING OTHER FEDERAL, STATE, OR LOCAL AUTHORIZATIONS AS REQUIRED BY LAW.

- WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTH MOVING PHASE OF THE GRADING IS INITIATED.
- TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN-PLACE AND ESTABLISHED.
- TEMPORARY EROSION CONTROL PROCEDURES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO APPLICATION FOR GRADING PERMIT.
- IF THE GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
- ALL GRADING AND CONSTRUCTION WORK SHALL IMPLEMENT MEASURES TO ENSURE THAT THE DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE WILL BE REDUCED TO THE MAXIMUM EXTENT PRACTICABLE AND WILL NOT CAUSE OR CONTRIBUTE TO AN EXCEEDANCE OF WATER QUALITY STANDARDS.
- THE CITY SHALL BE INFORMED OF THE LOCATION OF THE BORROW/DISPOSAL SITE FOR THE PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE. THE BORROW/DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
- NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE DIRECTOR, D.P.P., PROVIDED SUCH GRADING WORK IS ALSO IN CONFORMANCE WITH THE COMMUNITY NOISE CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 46, "COMMUNITY NOISE CONTROL".
- FOR NON-CITY PROJECTS, THE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEERING BRANCH, D.P.P. AT 768-8084 TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT TWO (2) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK. FOR CITY PROJECTS, THE CONTRACTOR SHALL COORDINATE INSPECTIONAL SERVICES WITH THE RESPONSIBLE CITY AGENCY.
- PURSUANT TO CHAPTER 6E, HRS. IN THE EVENT ANY ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATION, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE HONOLULU POLICE DEPARTMENT, THE STATE DEPARTMENT OF LAND AND NATURAL RESOURCES-HISTORIC PRESERVATION DIVISION (692-8015). IN ADDITION, FOR NON-CITY PROJECTS, THE CONTRACTOR SHALL INFORM THE CIVIL ENGINEERING BRANCH, D.P.P. (768-8084); AND FOR CITY PROJECTS, NOTIFY THE RESPONSIBLE CITY AGENCY.

UTILITY NOTES:

- ALL PIPE SIZES ARE IN INCHES UNLESS INDICATED OTHERWISE.
- SEE DETAILS 1 AND 3 ON DRAWING C-501 FOR TYPICAL PIPE TRENCH DETAIL.
- THE MINIMUM DEPTH OF COVER FOR ALL UTILITY PIPING SHALL BE 36 INCHES UNLESS INDICATED OTHERWISE.
 - ELECTRICAL: 24 INCHES
 - ALL OTHER UTILITIES: 36 INCHES

SPECIFICATION NOTES:

- THE FOLLOWING HAWAII DEPT. OF TRANSPORTATION (HDOT) STANDARD SPECIFICATION SECTIONS ARE INCORPORATED BY REFERENCE: HDOT SECTION 301 (HOT MIX ASPHALT BASE COURSE); HDOT SECTION 304 (AGGREGATE BASE COURSE); HDOT SECTION 401 (HOT MIX ASPHALT PAVEMENT); HDOT SECTION 641 (HYDRO-MULCH SEEDING).
- THE TECHNICAL PROVISIONS OF THE REFERENCED HDOT STANDARD SPECIFICATION SECTIONS ARE APPLICABLE TO THIS PROJECT. HOWEVER, SINCE THE PROJECT IS A LUMP SUM CONTRACT, THE PROVISIONS FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT ARE NOT APPLICABLE.

ABBREVIATIONS

AC	ACRES
CB	CATCH BASIN
CONC	CONCRETE
CJ	CONSTRUCTION JOINT
CU	CUBIC
CFM	CUBIC FEET PER MINUTE
CLSM	CONTROLLED LOW-STRENGTH MATERIAL
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWS	DETECTABLE WARNING SURFACE
EG	EXISTING GRADE
EL	ELEVATION
EFSO	EMERGENCY FUEL SHUT-OFF
EXIST	EXISTING
EXP	EXPANSION
FT	FEET
FM	FORCE MAIN (PRESSURIZED)
HORZ	HORIZONTAL
IN	INCHES
LF	LINEAR FEET
LS	LIFT STATION
MH	MANHOLE
MW	MONITORING WELL
NAVD	NORTH AMERICAN VERTICAL DATUM
NIC	NOT IN CONTRACT
NO	NUMBER
OC	ON CENTER
PDC	POWER DISTRIBUTION CENTER
R/W	RIGHT-OF-WAY
ROW	RIGHT-OF-WAY
SD	STORM DRAIN (GRAVITY)
SQ	SQUARE
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UON	UNLESS OTHERWISE NOTED

Scale For Microfinishing
Millimeters

Inches

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:
AFFECTED TAX MAP KEYS
 12025020
 12025021

**PRELIMINARY - NOT
FOR CONSTRUCTION**



9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
LICENSEE NO. 000165

date	1/17/17	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

**HAWAII FUELING
FACILITIES CORPORATION
(HFFC)**

**SAND ISLAND STORAGE FACILITY
HONOLULU INTERNATIONAL AIRPORT (HNL)
50 SAND ISLAND ACCESS RD.
HONOLULU, HI 96819**

SAND ISLAND STORMWATER

CIVIL GENERAL NOTES AND ABBREVIATIONS

project	131790	contract	
drawing	C-001	rev.	A

Signature _____ Expiration Date of the License _____
THIS WORK WAS PREPARED BY ME OR
UNDER MY SUPERVISION AND
CONSTRUCTION OF THIS PROJECT WILL
BE UNDER MY OBSERVATION

file 131790_C-001.DWG

EROSION PREVENTION BMPS:

1. PERMANENT STABILIZATION
 - PRIOR TO CLOSING OF ANY PERMIT(S) PERMANENT STABILIZATION MUST BE IN PLACE WHICH INCLUDES THE FOLLOWING REQUIREMENTS:
 - ALL EXPOSED DISTURBED AREAS MUST BE PERMANENTLY STABILIZED WITH GROUND COVERING SUCH AS VEGETATION, GRAVEL, OR PAVERS;
 - RAIN GUTTERS, DOWNSPOUTS, AND CHANNELIZED FLOWS MUST BE INSTALLED AND FUNCTIONING AS DESIGNED;
 - IN SEEDED AREAS, GRASS OR VEGETATION MUST COVER AT LEAST 90 PERCENT OF THE DISTURBED SOILS OR MUST BE TEMPORARY STABILIZED WHILE IT IS GROWING;
 - TEMPORARY MEASURES, SUCH AS SEDIMENT BARRIERS, SHOULD BE REMOVED WHEN PERMANENT MEASURES ARE IN PLACE;
 - ALL PAVED SURFACES MUST BE CLEAN; AND
 - STORM DRAIN INLET FILTERS MUST BE REMOVED AFTER ALL CLEANUP ACTIVITIES HAVE BEEN COMPLETED.
2. TEMPORARY STABILIZATION
 - TEMPORARY STABILIZATION IS REQUIRED ON DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHEN THE DISTURBED AREA WILL NOT BE WORKED FOR 14 CONSECUTIVE DAYS OR MORE.
 - THIS PROJECT WILL USE ROLLED EROSION CONTROL PRODUCTS OR PLANTING AND VEGETATION FOR TEMPORARY STABILIZATION.

SEDIMENT CONTROL BMPS:

1. PERIMETER CONTROLS
 - SEDIMENT FENCES OR BARRIERS SHALL BE USED AT THE PERIMETER OF ALL DISTURBED AREAS WHERE THERE IS POTENTIAL FOR RUNOFF TO FLOW OFF THE PROJECT SITE. BARRIERS MAY INCLUDE GRAVEL BAGS, SAND BAGS, FIBER ROLLS, SILT FENCES, COMPOST SOCKS, OR AN EQUIVALENT BMP THAT INTERCEPTS RUNOFF.
2. INLET PROTECTION
 - ALL STORM DRAIN INLETS ONSITE AND THOSE OFFSITE WHICH MAY RECEIVE RUNOFF FROM THE SITE SHALL USE AN INLET PROTECTION DEVICE UNLESS THEY ARE DIRECTED TO A SEDIMENT BASIN OR TRAP.

GOOD HOUSEKEEPING BMPS:

1. BMP AND SITE MAINTENANCE
 - REGULARLY INSPECT AND MAINTAIN BMPS TO ENSURE CONTINUED PERFORMANCE.
2. DUST CONTROL
 - DUST FROM THE PROJECT SITE SHALL NOT BE TRANSPORTED OR DISCHARGED TO OFF-SITE AREAS.
 - THIS PROJECT WILL USE WATER TO MAINTAIN SOIL MOISTURE TO PREVENT DUST.
3. CONCRETE WASTE MANAGEMENT
 - PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE OR PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
 - PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MILLIMETER POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
 - CONTAINMENT AREAS OR DEVICES SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS.
 - WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75 PERCENT FULL.
 - ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF AS SOLID WASTES.
4. STOCKPILE MANAGEMENT
 - STOCKPILES SHALL NOT BE LOCATED IN DRAINAGE WAYS, WITHIN 50 FEET FROM AREAS OF CONCENTRATED FLOWS, AND ARE NOT ALLOWED IN THE CITY RIGHT-OF-WAY. SEDIMENT BARRIERS OR SILT FENCES SHALL BE USED AROUND THE BASE OF ALL STOCKPILES. STOCKPILES SHALL NOT EXCEED 15 FEET IN HEIGHT. STOCKPILES GREATER THAN 15 FEET IN HEIGHT SHALL REQUIRE 8-FOOT WIDE BENCHING IN ACCORDANCE WITH ROH CHAPTER 14, ARTICLE 15. STOCKPILES MUST BE COVERED WITH PLASTIC SHEETING OR A COMPARABLE MATERIAL IF THEY WILL NOT BE ACTIVELY USED WITHIN 7 DAYS.
5. VEHICLE TRACKING CONTROL
 - RESTRICT VEHICLE TRAFFIC TO PROPERLY DESIGNATED AREAS AND REMOVE SEDIMENT FROM VEHICLE TIRES PRIOR TO EXITING THE PROJECT SITE. ALL SEDIMENTS THAT ARE TRACKED OR DISCHARGED OFF-SITE MUST BE SWEEPED OR VACUUMED AT THE END OF EACH DAY.
6. MATERIALS DELIVERY, STORAGE AND USE MANAGEMENT
 - MINIMIZE THE STORAGE OF POTENTIAL POLLUTANTS ONSITE. STORE MATERIALS IN A DESIGNATED AREA, AND INSTALL SECONDARY CONTAINMENT. DO NOT STORE MATERIALS IN BUFFER AREAS, NEAR AREAS OF CONCENTRATED FLOW, OR AREAS ABUTTING THE CITY STORM DRAINAGE SYSTEM, RECEIVING WATERS, OR DRAINAGE IMPROVEMENTS THAT DISCHARGE OFF-SITE.
7. SPILL PREVENTION AND CONTROL
 - KEEP AMPLE SUPPLY OF CLEANUP MATERIALS ONSITE. CLEAN UP SPILLS IMMEDIATELY, USING DRY CLEAN-UP METHODS WHERE POSSIBLE, AND DISPOSE OF USED MATERIALS PROPERLY.
8. SOLID WASTE MANAGEMENT
 - PREVENT OR REDUCE DISCHARGE OF POLLUTANTS TO THE LAND, GROUNDWATER, AND IN STORM WATER FROM SOLID WASTE OR CONSTRUCTION AND DEMOLITION WASTE BY PROVIDING DESIGNATED WASTE COLLECTION AREAS, COLLECT SITE TRASH DAILY, AND ENSURING THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL AREAS.
9. PORTABLE TOILETS (SANITARY/SEPTIC WASTE MANAGEMENT)
 - TEMPORARY AND PORTABLE SANITARY AND SEPTIC WASTE SYSTEMS SHALL BE MOUNTED OR STAKED IN, WELL-MAINTAINED AND SCHEDULED FOR REGULAR WASTE DISPOSAL AND SERVICING. SOURCES OF SANITARY AND/OR SEPTIC WASTE SHALL NOT BE STORED NEAR THE MS4 OR RECEIVING WATERS.

GOOD HOUSEKEEPING BMPS (CONTD):

10. VEHICLE AND EQUIPMENT CLEANING, FUELING, AND MAINTENANCE
 - PREVENT POLLUTANTS IN STORM WATER FROM VEHICLE AND EQUIPMENT CLEANING, FUELING AND MAINTENANCE BY USING OFF-SITE FACILITIES WHEN FEASIBLE. PERFORMING WORK IN DESIGNATED AREAS ONLY, USING SPILL PADS UNDER VEHICLES AND EQUIPMENT, CHECKING FOR LEAKS AND SPILLS, AND CONTAINING AND CLEANING UP SPILLS IMMEDIATELY.
11. HAZARDOUS MATERIALS
 - PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM HAZARDOUS WASTE THROUGH PROPER MATERIAL USE AND WASTE DISPOSAL. IN THE EVENT THAT HAZARDOUS MATERIALS ARE DISCHARGED TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL IMMEDIATELY NOTIFY THE DEPARTMENT OF FACILITIES MAINTENANCE, HONOLULU FIRE DEPARTMENT, AND HONOLULU POLICE DEPARTMENT OF THE DISCHARGE BY TELEPHONE. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGED, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.
12. NON-HAZARDOUS MATERIALS
 - IN THE EVENT THAT NON-HAZARDOUS MATERIALS ARE DISCHARGED TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL NOTIFY THE CITY DEPARTMENT OF FACILITIES MAINTENANCE BY TELEPHONE NO LATER THAN THE NEXT BUSINESS DAY. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGED, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.

OMITTED BMPS:

A COMPREHENSIVE LIST OF BMPS BASED ON THE DPP RULES RELATING TO WATER QUALITY AND GUIDANCE DOCUMENTS MENTIONED ABOVE, WERE REVIEWED TO COMPLETE THIS ESCP. THE FOLLOWING BMPS WERE DETERMINED TO BE NOT APPLICABLE BECAUSE THEY WOULD NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL BASED ON THE SPECIFIC SITE CONDITIONS. AS CONSTRUCTION PROGRESSES, REVISIONS MAY BE NECESSARY AND WILL BE PROVIDED TO DPP INSPECTORS.

OMITTED BMPS	RATIONALE
DEWATERING OPERATIONS	THERE WILL BE NO DEWATERING ONSITE
LIQUID WASTE MANAGEMENT	THERE WILL BE NO LIQUID WASTE OR NON-STORM WATER ON SITE.
SLOPE MANAGEMENT AND PROTECTION	ALL WORK WILL BE ON SLOPES LESS THAN 15%
CONTAMINATED SOIL MANAGEMENT	THERE ARE NO CONTAMINATED SOILS ANTICIPATED ON SITE
VEHICLE AND EQUIPMENT CLEANING, FUELING AND MAINTENANCE	THERE WILL BE NO ON-SITE CLEANING, FUELING OR MAINTENANCE OF ANY CONSTRUCTION VEHICLES OR EQUIPMENT

SCHEDULE NOTES:

1. AN ESCP COORDINATOR FOR THE PROJECT MUST BE DESIGNATED TO DPP IN WRITING BEFORE PERMIT ISSUANCE USING APPENDIX A OR B OF THE RULES RELATING TO WATER QUALITY.
2. NOTIFY DPP IN WRITING TWO WEEKS PRIOR TO STARTING WORK BY EMAIL OR PHONE: 768-8132.
3. MEASURES TO PREVENT AND CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTHWORK IS INITIATED.
4. BEST MANAGEMENT PRACTICES (BMPS) SHALL NOT BE REMOVED UNTIL FINAL STABILIZATION IS COMPLETE.
5. PRACTICE GOOD HOUSEKEEPING MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.
6. INSPECTIONS WILL BE PERFORMED MONTHLY AT A MINIMUM AND MAY BE PERFORMED MORE FREQUENTLY AS NEEDED.

PROJECT SCHEDULE:

THE FOLLOWING IS THE PLANNED SEQUENCE AND TIMELINE OF ACTIVITIES. REVISIONS MAY BE NECESSARY AND WILL BE PROVIDED TO DPP INSPECTORS.

ACTION	TIMELINE OR DATE (NOTE 1)
SAND ISLAND STORMWATER SYSTEM WORK	
NOTIFY THE DEPARTMENT OF PLANNING AND PERMITTING OF PROJECT START DATE - 768-8132	2 WEEKS BEFORE STARTING WORK
INSTALL DRAIN INLET PROTECTION AND PERIMETER CONTROLS	DAY 1
PERFORM PRE-CONSTRUCTION INSPECTION	DAY 1
SITE CLEARING	3 DAYS
OBSERVATION BASIN EXCAVATION	1 WEEK
OBSERVATION BASIN CONCRETE FOUNDATION	2 WEEKS
OBSERVATION BASIN VERTICAL CONSTRUCTION THROUGH FINAL STABILIZATION	1 MONTH
ABOVE GRADE STORMWATER PIPING INSTALLATION	1 WEEK
TRENCHING FOR STORMWATER OUTFALL PIPING	1 WEEK
INSTALL STORMWATER OUTFALL PIPING AND CONNECT TO STORM DRAIN	1 WEEK
BACKFILL AND RESURFACE PIPING TRENCH	1 WEEK
DEMOBILIZE EQUIPMENT AND MATERIALS	2 DAYS
REMOVE DRAIN INLET PROTECTION AND PERIMETER CONTROLS	1 DAY
SWEEPING AND WASTE DISPOSAL	DAILY

1. TIMELINE IDENTIFIES CONSTRUCTION ACTIVITIES LOCATED OUTSIDE THE EXTENTS OF EXISTING SITE CONTAINMENT WALL.

RAIN RESPONSE PLAN:

THE FOLLOWING WILL BE PERFORMED WHEN SEVERE RAIN IS IMMINENT OR IS FORECASTED IN THE NEXT 48 HOURS:

1. TEMPORARILY SUSPEND LAND DISTURBING ACTIVITIES INCLUDING CLEARING, GRUBBING, GRADING AND TRENCHING.
2. INSPECT ALL BMPS AND MAINTAIN AS NEEDED.
3. REINSTALL BMPS THAT WERE REMOVED DUE TO ACTIVE WORK IN THE AREA.
4. IF A SEVERE STORM IS EXPECTED, REMOVE INLET PROTECTION DEVICES TO PREVENT FLOODING ON SURROUNDING STREETS.
5. COVER OR RELOCATE MATERIAL STOCKPILES AND LIQUID MATERIAL CONTAINERS TO AVOID CONTACT WITH RAINWATER.
6. PLACE SPILL PANS OR OIL-ONLY SPILL PADS UNDER CONSTRUCTION VEHICLES TO PREVENT RUNOFF FROM CONTACTING ANY SPILLED PETROLEUM PRODUCTS. PROPERLY DISPOSE OF ANY ACCUMULATED OILY WATER AFTER THE RAIN EVENT.
7. RE-INSPECT PROJECT SITE AFTER THE RAIN EVENT AND REPLACE OR MAINTAIN BMPS AS NEEDED.

STREET USAGE PERMITS:

1. IF THE PROPOSED LAND DISTURBING WORK WILL BE PERFORMED IN THE CITY SIDEWALK OR RIGHT-OF-WAY AND/OR BEST MANAGEMENT PRACTICES INSTALLED IN THE SIDEWALK AREA (AREA BETWEEN THE PROPERTY LINE AND EDGE OF PAVEMENT), THE OWNER IS RESPONSIBLE FOR OBTAINING A PERMIT FOR STREET USAGE FROM THE DEPARTMENT OF TRANSPORTATION SERVICES, 650 S. KING STREET, 2ND FLOOR, HONOLULU, HAWAII, 96813.
2. THE OWNER IS RESPONSIBLE FOR INSTALLING APPROPRIATE BARRICADES, FLASHERS, AND SIGNAGE FOR PEDESTRIAN AND VEHICULAR SAFETY, AND REMOVING THE INLET PROTECTION(S) BEFORE A STORM EVENT TO PREVENT FLOODING OF THE ROAD AND AFTER THE PROJECT SITE IS COMPLETELY STABILIZED.

Millimeters

Scale For Microfining

Inches

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:

AFFECTED	TAX MAP KEYS
<input type="checkbox"/>	12025020
<input type="checkbox"/>	12025021

PRELIMINARY - NOT FOR CONSTRUCTION



9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
LICENSEE NO. 000165

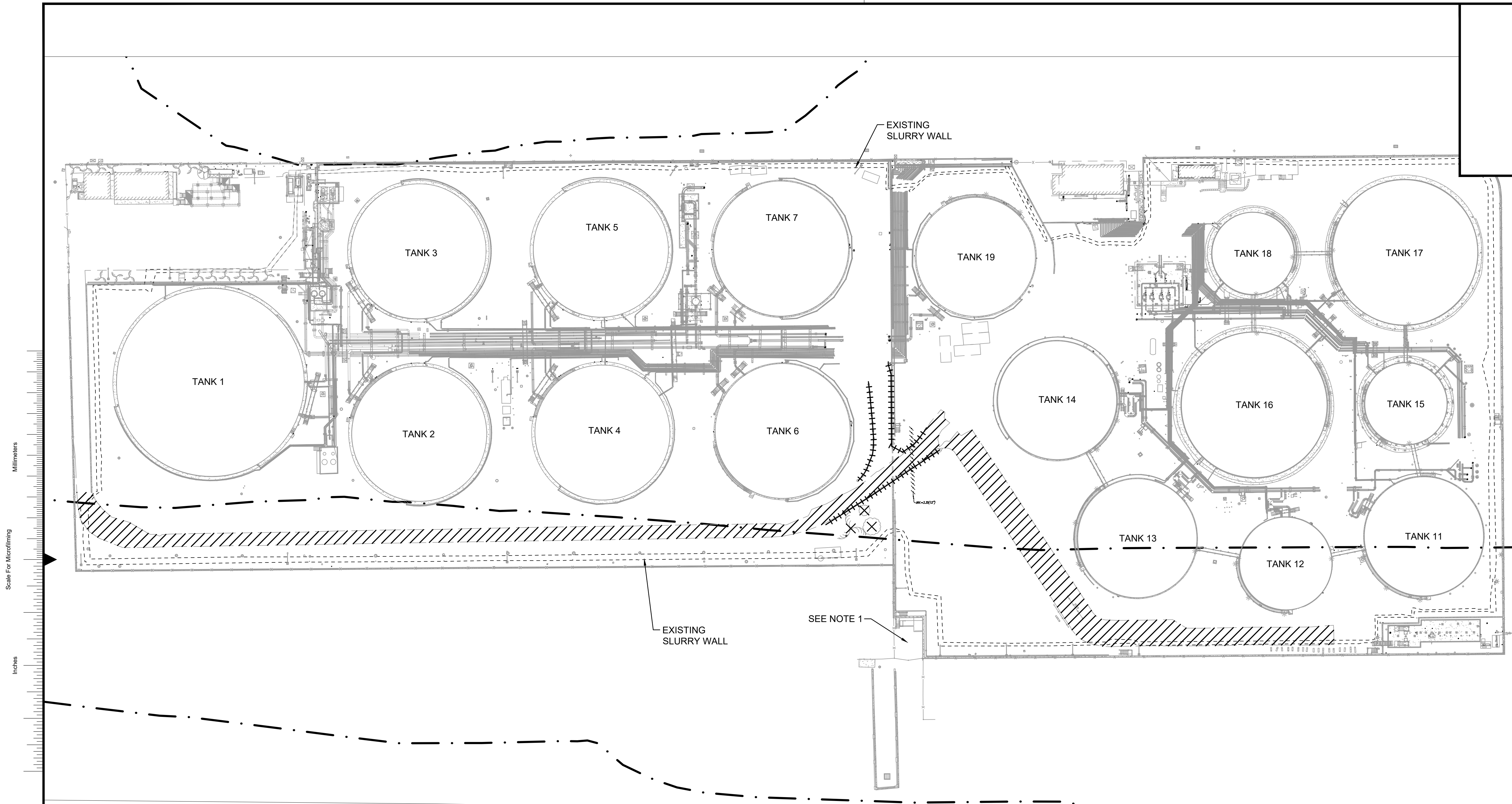
date	01/14/19	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

HAWAII FUELING FACILITIES CORPORATION (HFFC)

SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819

SAND ISLAND STORMWATER	
EROSION CONTROL NOTES	
project	contract
131790	
drawing	rev.
C-002	- A
file 131790_C-002.DWG	

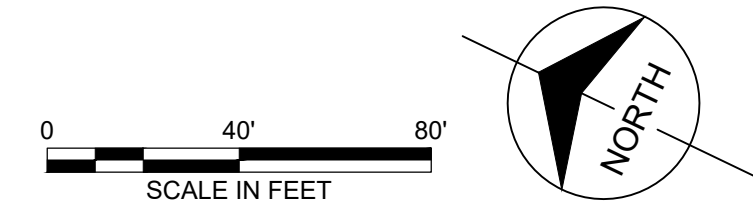
Signature _____ Expiration Date of the License _____
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION



Millimeters
Scale For Microfining
Inches

LEGEND:

	ASPHALT DEMOLITION
	UTILITY DEMOLITION
	GUARDRAIL DEMOLITION
	VEGETATION DEMOLITION



NOTES:

1. THIS AREA CONTAINS AN ABANDONED OIL-WATER SEPARATOR. THE OIL-WATER SEPARATOR HAS BEEN BACKFILLED. REMOVE BACKFILL AND DEMOLISH EXISTING OIL-WATER SEPARATOR AND OTHER EQUIPMENT TO CONSTRUCT CONCRETE OBSERVATION BASIN.

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
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SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:

AFFECTED	TAX MAP KEYS
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<input checked="" type="checkbox"/>	12025021

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816-333-9400
LICENSEE NO. 000165

date	1/17/17	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

HAWAII FUELING FACILITIES CORPORATION (HFFC)

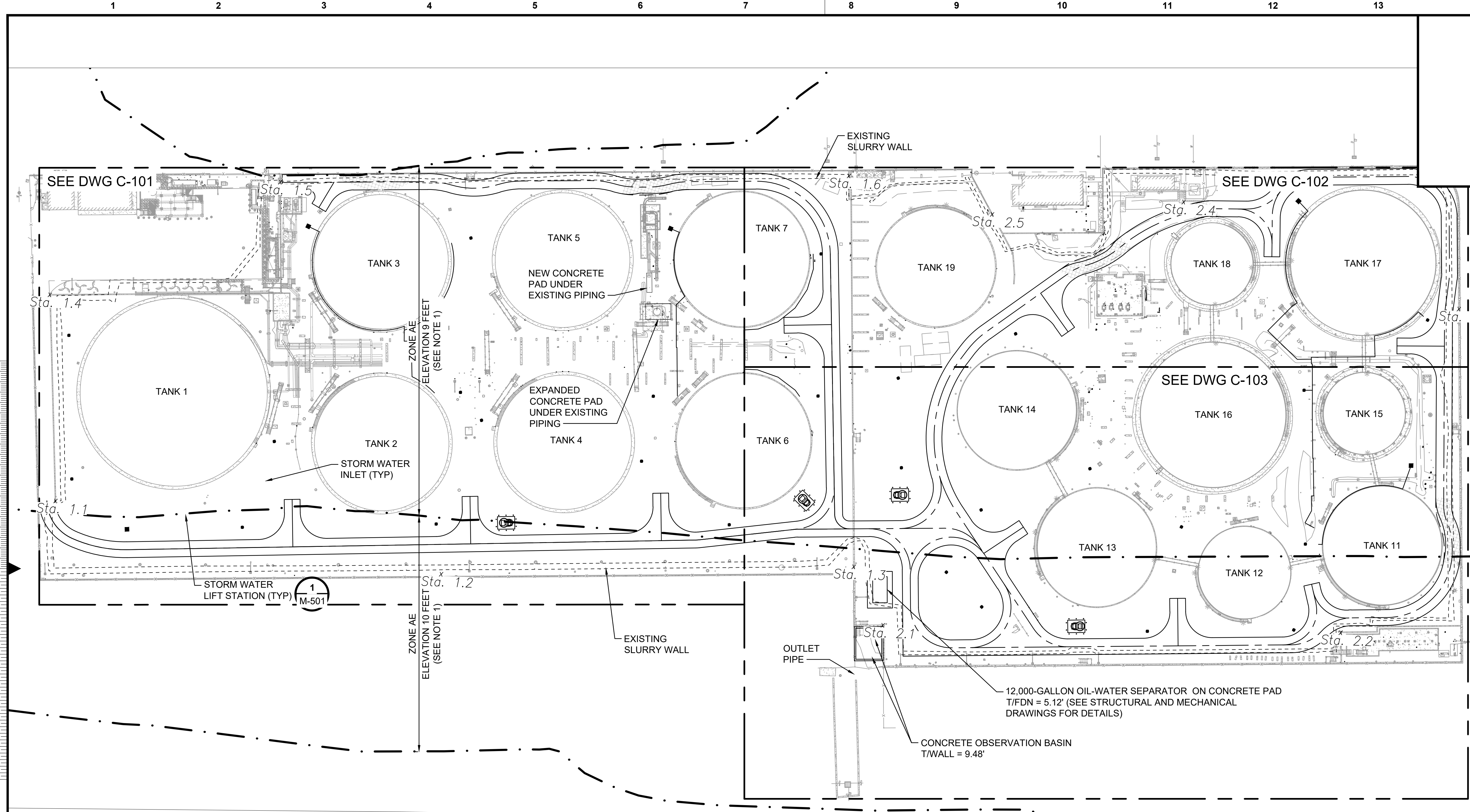
**SAND ISLAND STORAGE FACILITY
HONOLULU INTERNATIONAL AIRPORT (HNL)
50 SAND ISLAND ACCESS RD.
HONOLULU, HI 96819**

SAND ISLAND STORMWATER

OVERALL DEMOLITION PLAN

project	131790	contract	
drawing	C-010	rev.	----

file 131790_C-010.DWG



no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:

AFFECTED	TAX MAP KEYS
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<input checked="" type="checkbox"/>	12025021

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LICENSEE NO. 000165

date	detailed
1/17/17	J. EICHENBERGER
designed	checked
W. BATTEY	B. HANSEN

**HAWAII FUELING
FACILITIES CORPORATION
(HFFC)**

**SAND ISLAND STORAGE FACILITY
HONOLULU INTERNATIONAL AIRPORT (HNL)
50 SAND ISLAND ACCESS RD.
HONOLULU, HI 96819**

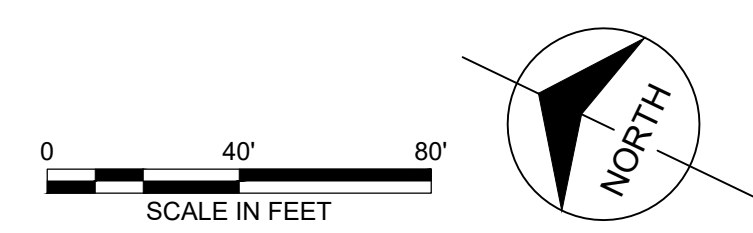
SAND ISLAND STORMWATER

OVERALL SITE PLAN

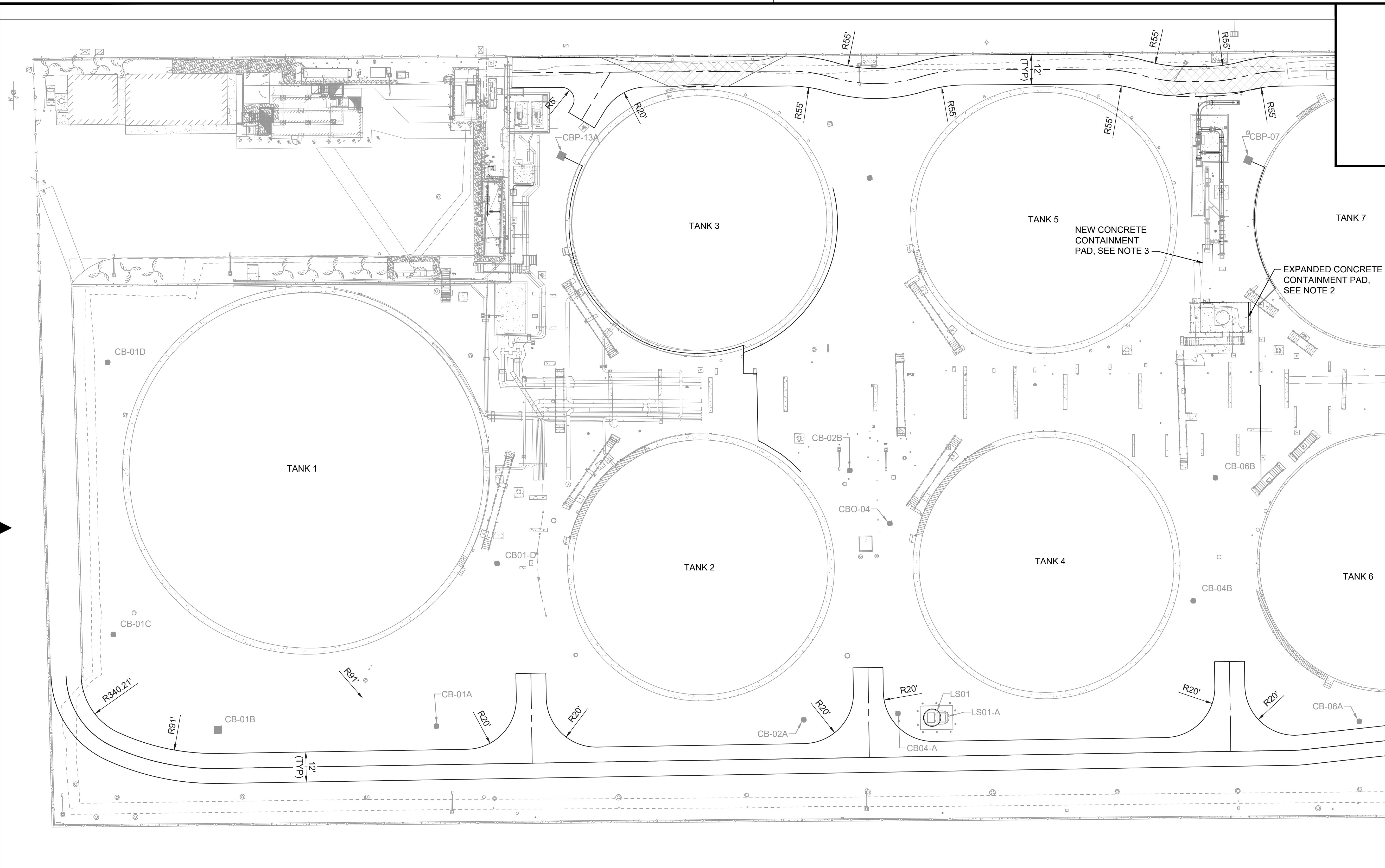
project	contract
131790	
drawing	rev.
C-100	A
file 131790_C-100.DWG	

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
STA 1.1	55324.67	1677426.92	5.88	BOLT IN WALL
STA 1.2	55036.87	1677503.32	4.40	"Y" MARK ON CONCRETE
STA 1.3	54757.13	1677643.78	8.51	BOLT ON WALL
STA 1.4	55396.27	1677566.09	9.88	"Y" CUT ON WALL
STA 1.5	55275.65	1677718.78	9.89	"Y" CUT ON WALL
STA 1.6	54888.68	1677909.73	8.87	"Y" CUT ON WALL
STA 2.1	54718.03	1677613.33	8.45	"Y" CUT ON WALL
STA 2.2	54402.36	1677758.55	7.93	"Y" CUT ON WALL
STA 2.3	54427.84	1678018.68	8.55	"Y" CUT ON WALL
STA 2.4	54651.13	1678001.62	6.31	"Y" CUT ON CONCRETE
STA 2.5	54778.13	1677930.29	9.57	"Y" CUT ON WALL

- CONTROL POINT NOTES:**
- CONTROL POINTS ARE FROM A SURVEY BY ACE LAND SURVEYING, LLC DATED JUNE 30, 2018.
 - COORDINATES AND ELEVATIONS ARE DERIVED FROM A FEDERAL BENCHMARK "NALO MELI" (DL6020), A BRASS DISK REFERENCED TO NAD 83 (PA11), N 54,154.91 E 1,679,007.31, ELEV 6.40 FEET.
 - BENCHMARK DATA IS PROVIDED BY THE NATIONAL GEODETIC SURVEY WITH CONVERSIONS TO ZONE HI 3-5103, US FEET.



- NOTES:**
- FEMA ZONE AE SPECIAL FLOOD HAZARD AREAS OF DIFFERENT BASE FLOOD ELEVATIONS AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP NUMBER 15003C0353G, MAP REVISED JANUARY 19, 2011.



Millimeters
 Scale For Microfining
 Inches

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

MATCHLINE - SEE DRAWING C-103 FOR CONTINUATION

MATCHLINE - SEE DRAWING C-102 FOR CONTINUATION

SEE SHEET G-101 FOR
 TMK REFERENCE LOCATIONS:
 AFFECTED TAX MAP KEYS
 12025020
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 LICENSE NO. 000165

date	05/05/2021	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

**HAWAII FUELING
 FACILITIES CORPORATION
 (HFFC)**

**SAND ISLAND STORAGE FACILITY
 HONOLULU INTERNATIONAL AIRPORT (HNL)
 50 SAND ISLAND ACCESS RD.
 HONOLULU, HI 96819**

SAND ISLAND STORMWATER

SITE PLAN - 1

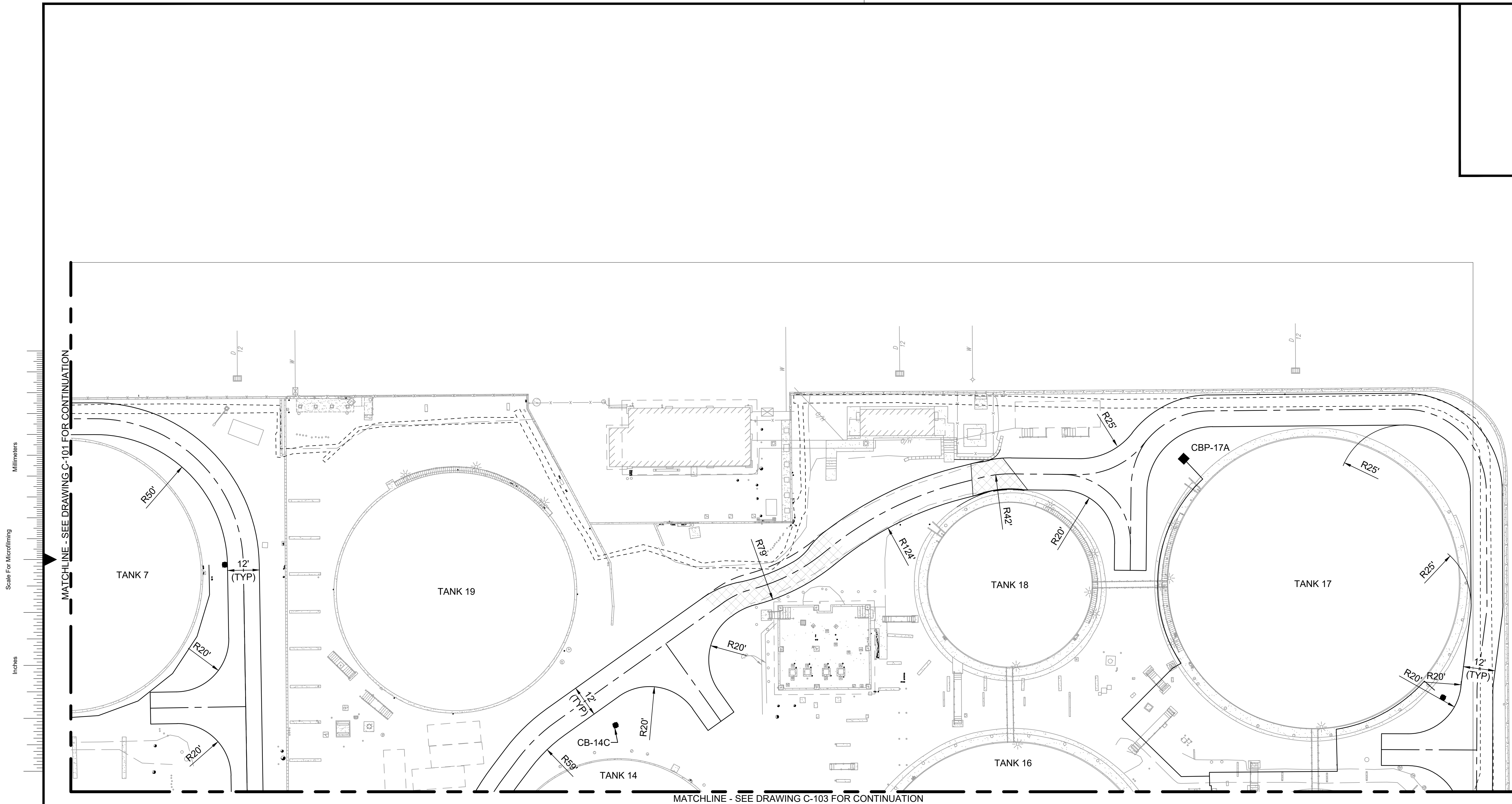
project	131790	contract	
drawing	C-101	rev.	----

file 131790_C-101_103.DWG

NOTES:

- SEE DRAWING C-001 FOR CIVIL GENERAL NOTES.
- EXPAND EXISTING CONCRETE PAD (UNDER PLATFORM) FOR A NEW 19' x 12' CURBED CONCRETE CONTAINMENT SLAB. PROVIDE ISOLATION JOINTS BETWEEN EXISTING AND NEW CONCRETE. REPLACE PIPE SUPPORT SOUTH OF FILTER VESSEL. SEE STRUCTURAL AND MECHANICAL DRAWINGS FOR DETAILS.
- CURBED CONCRETE PAD, 4' x 14'-8 3/8". SEE MECHANICAL DRAWINGS FOR LOCATION RELATIVE TO PIPING. SEE STRUCTURAL DRAWINGS FOR PAD DETAIL.

Signature _____ Expiration Date of the License _____
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION



Scale For Microfinishing
Millimeters
Inches

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:
AFFECTED TAX MAP KEYS
 12025020
 12025021

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LICENSEE NO. 000165

date	05/05/2021	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

**HAWAII FUELING
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(HFFC)**

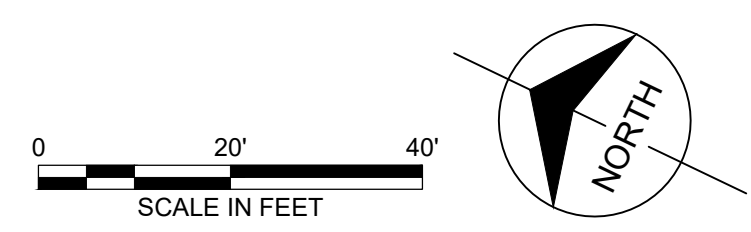
**SAND ISLAND STORAGE FACILITY
HONOLULU INTERNATIONAL AIRPORT (HNL)
50 SAND ISLAND ACCESS RD.
HONOLULU, HI 96819**

SAND ISLAND STORMWATER

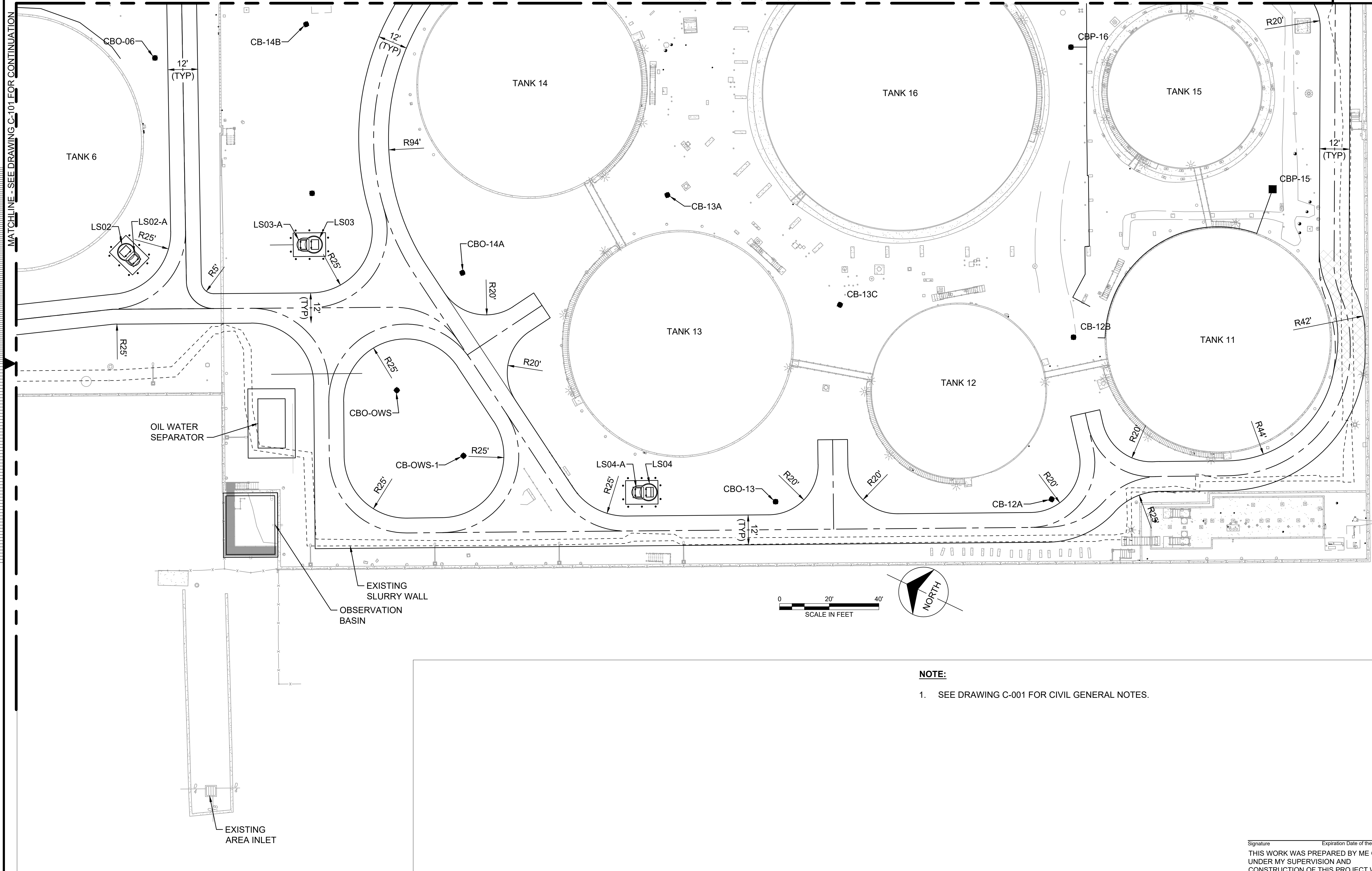
SITE PLAN - 2

project	131790	contract	
drawing	C-102	rev.	----

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MATCHLINE - SEE DRAWING C-102 FOR CONTINUATION



no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:
AFFECTED TAX MAP KEYS
 12025020
 12025021

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KANSAS CITY, MO 64114
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LICENSEE NO. 000165

date	05/05/2021	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

HAWAII FUELING
FACILITIES CORPORATION
(HFFC)

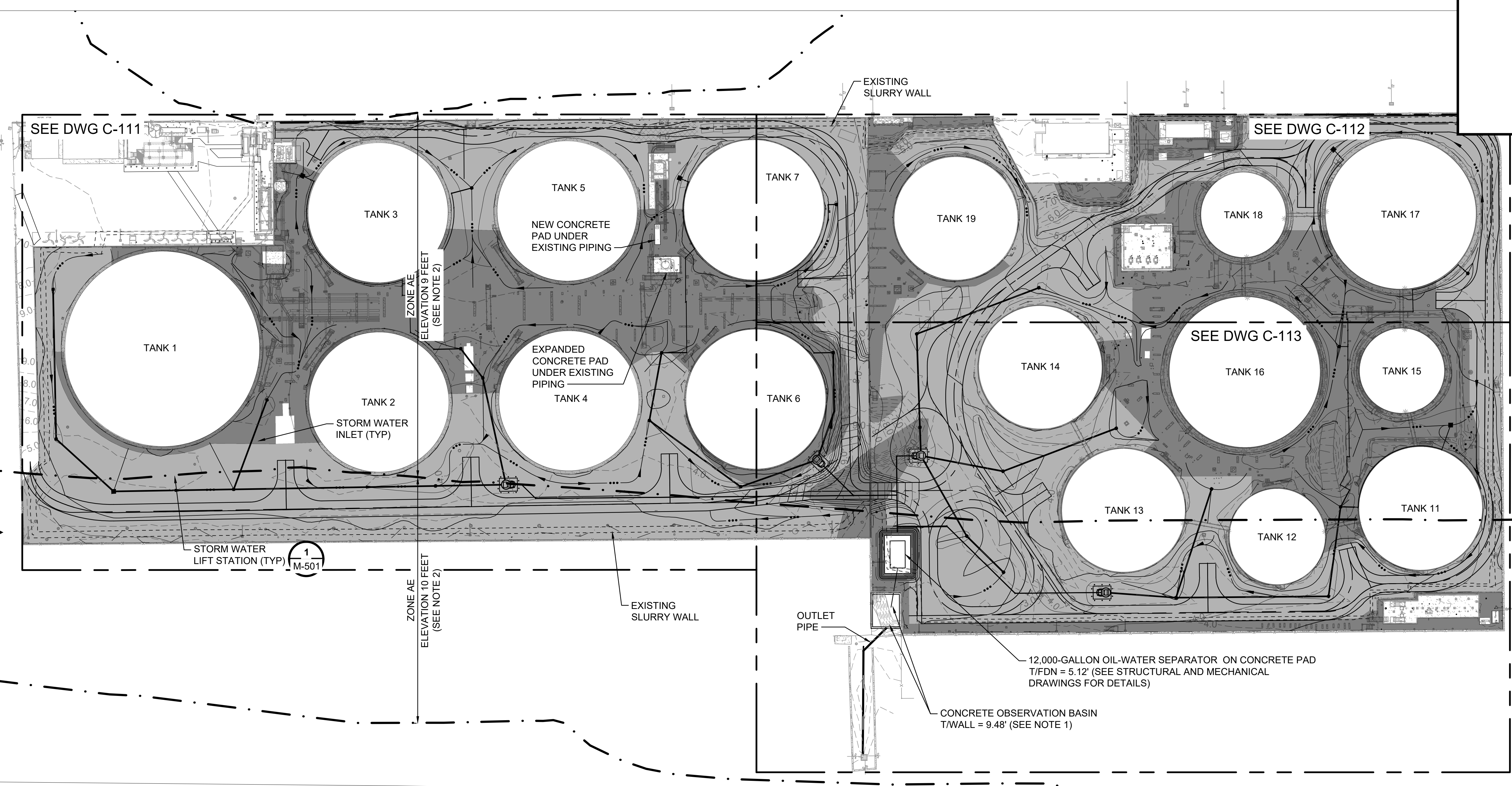
SAND ISLAND STORAGE FACILITY
HONOLULU INTERNATIONAL AIRPORT (HNL)
50 SAND ISLAND ACCESS RD.
HONOLULU, HI 96819

SAND ISLAND STORMWATER	
SITE PLAN - 3	
project	contract
131790	
drawing	rev.
C-103	----
file 131790_C-101_103.DWG	

NOTE:
1. SEE DRAWING C-001 FOR CIVIL GENERAL NOTES.

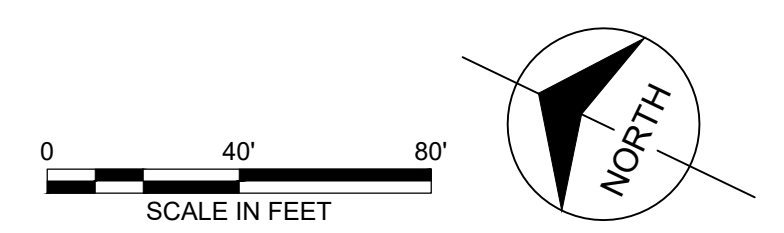
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Scale For Microfinishing
Millimeters
Inches



LEGEND:

---	3.0	EXISTING MAJOR CONTOUR	■	SOLIDS SPRAY APPLIED ELASTOMERIC LINER (BCI 3900 OR EQUAL) ON GEOTEXTILE APPROX. 53,000 SQUARE FEET
---	3.5	EXISTING MINOR CONTOUR	■	ASPHALT PAVEMENT APPROX. 129,000 SQUARE FEET
---	3.0	PROPOSED MAJOR CONTOUR	—	HEAVY TRAFFIC ROUTE (INCREASED ASPHALT THICKNESS) APPROX. 3,250 LF @ 10' WIDE
---	3.5	PROPOSED MINOR CONTOUR	—	STORMWATER FORCEMAIN
- - - - -		LIMITS OF GRADING	■	CATCH BASIN
→		FLOWLINE		
- - - - -		EXISTING SLURRY WALL		
—	8" SD	GRAVITY STORM DRAIN		
—	4" FM	STORMWATER FORCEMAIN		



- NOTES:**
- THIS AREA CONTAINS AN ABANDONED OIL-WATER SEPARATOR. THE OIL-WATER SEPARATOR HAS BEEN BACKFILLED. REMOVE BACKFILL AND DEMOLISH EXISTING OIL-WATER SEPARATOR AND OTHER EQUIPMENT TO CONSTRUCT CONCRETE OBSERVATION BASIN.
 - FEMA ZONE AE SPECIAL FLOOD HAZARD AREAS OF DIFFERENT BASE FLOOD ELEVATIONS AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP NUMBER 15003C0353G, MAP REVISED JANUARY 19, 2011.

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23	WBB		PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:
AFFECTED TAX MAP KEYS
 12025020
 12025021

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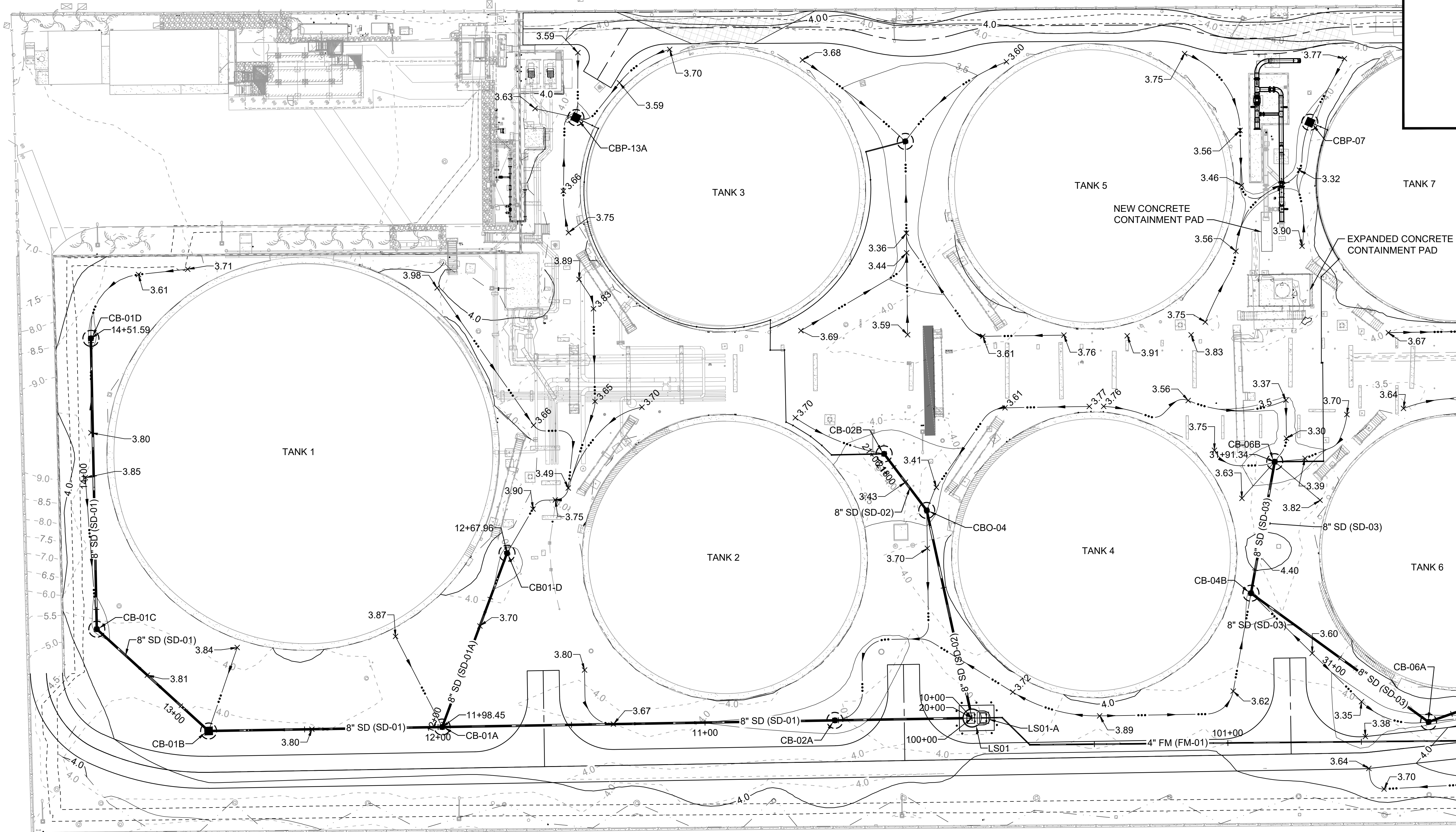
BURNS MEDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
LICENSEE NO. 000165

date	#####	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

HAWAII FUELING FACILITIES CORPORATION (HFFC)
SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819

SAND ISLAND STORMWATER
OVERALL GRADING AND UTILITY PLAN

project	131790	contract	
drawing	C-110	rev.	----



Scale For Microfinishing
Millimeters
Inches

- LEGEND:**
- 3.0 --- EXISTING MAJOR CONTOUR
 - 3.5 --- EXISTING MINOR CONTOUR
 - 3.0 — PROPOSED MAJOR CONTOUR
 - 3.5 — PROPOSED MINOR CONTOUR
 - - - - - LIMITS OF GRADING
 - >--- FLOWLINE
 - - - - - EXISTING SLURRY WALL
 - 8" SD — GRAVITY STORM DRAIN
 - 4" FM — STORMWATER FORCEMAIN
 - CATCH BASIN



NOTES:
1. SEE DRAWING C-001 FOR CIVIL GENERAL NOTES.

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:

AFFECTED	TAX MAP KEYS
<input checked="" type="checkbox"/>	12025020
<input type="checkbox"/>	12025021

PRELIMINARY - NOT FOR CONSTRUCTION



9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
LICENSEE NO. 000165

date	05/05/2021	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

HAWAII FUELING FACILITIES CORPORATION (HFFC)

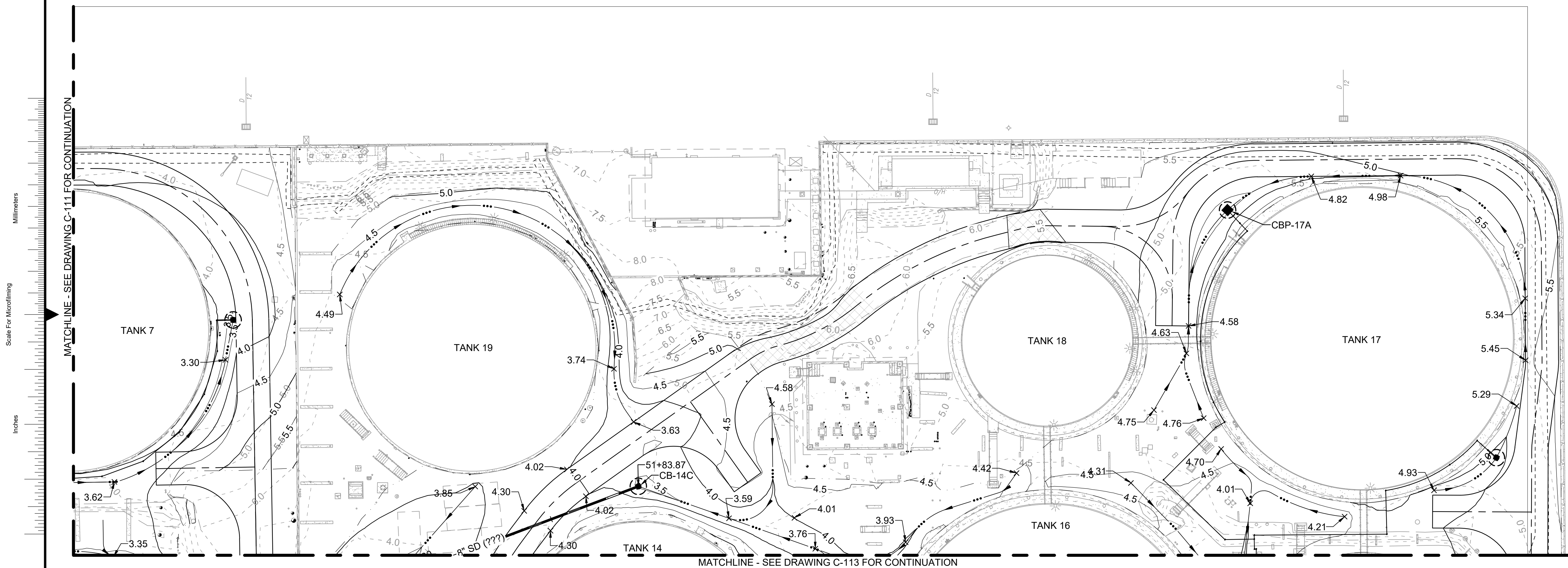
**SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL)
50 SAND ISLAND ACCESS RD.
HONOLULU, HI 96819**

SAND ISLAND STORMWATER GRADING AND UTILITY PLAN - 1

project	131790	contract	
drawing		rev.	

C-111 - A

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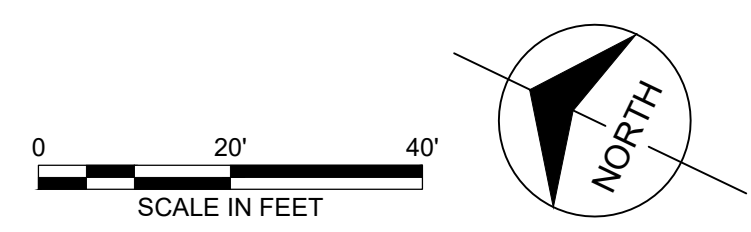


Scale For Microfinishing
Millimeters
Inches

MATCHLINE - SEE DRAWING C-111 FOR CONTINUATION

MATCHLINE - SEE DRAWING C-113 FOR CONTINUATION

- LEGEND:**
- 3.0 --- EXISTING MAJOR CONTOUR
 - 3.5 --- EXISTING MINOR CONTOUR
 - 3.0 — PROPOSED MAJOR CONTOUR
 - 3.5 — PROPOSED MINOR CONTOUR
 - - - - - LIMITS OF GRADING
 - > FLOWLINE
 - - - - - EXISTING SLURRY WALL
 - 8" SD — GRAVITY STORM DRAIN
 - 4" FM — STORMWATER FORCEMAIN
 - CATCH BASIN



no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:
AFFECTED TAX MAP KEYS
 12025020
 12025021

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FOR CONSTRUCTION**

**BURNS
MEDONNELL**
 9400 WARD PARKWAY
 KANSAS CITY, MO 64114
 816-333-9400
 LICENSEE NO. 000165

date	05/05/2021	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

**HAWAII FUELING
FACILITIES CORPORATION
(HFFC)**
**SAND ISLAND STORAGE FACILITY
HONOLULU INTERNATIONAL AIRPORT (HNL)
50 SAND ISLAND ACCESS RD.
HONOLULU, HI 96819**

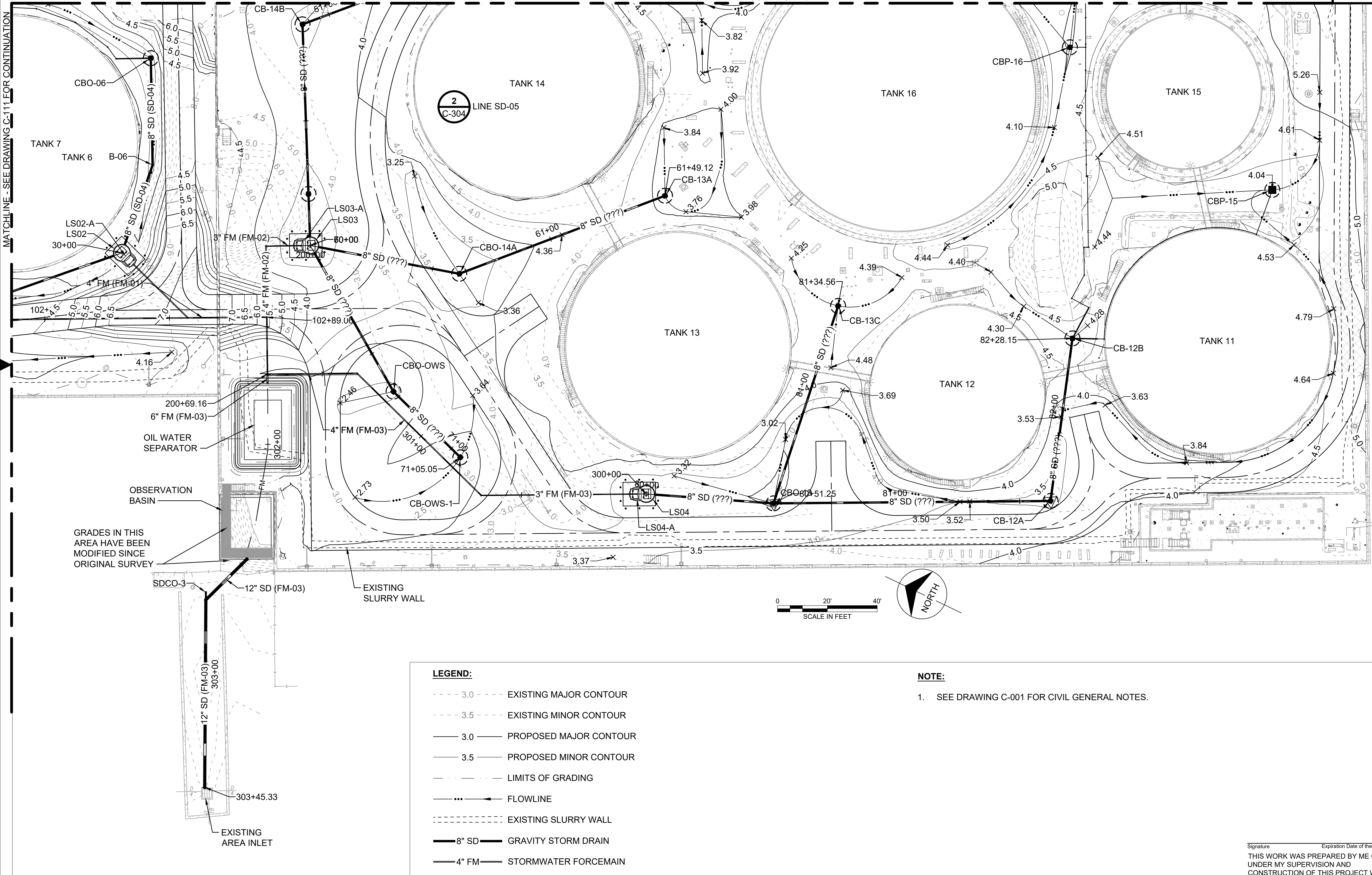
SAND ISLAND STORMWATER
 GRADING AND UTILITY PLAN - 2

project	131790	contract	
drawing	C-112	rev.	A

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file 131790_C-111_113.DWG

MATCHLINE - SEE DRAWING C-112 FOR CONTINUATION



MATCHLINE - SEE DRAWING C-111 FOR CONTINUATION

Scale For Microfinishing
Millimeters

Inches

GRADES IN THIS AREA HAVE BEEN MODIFIED SINCE ORIGINAL SURVEY

- LEGEND:**
- 3.0 --- EXISTING MAJOR CONTOUR
 - 3.5 --- EXISTING MINOR CONTOUR
 - 3.0 — PROPOSED MAJOR CONTOUR
 - 3.5 — PROPOSED MINOR CONTOUR
 - --- LIMITS OF GRADING
 - > FLOWLINE
 - --- EXISTING SLURRY WALL
 - 8" SD — GRAVITY STORM DRAIN
 - 4" FM — STORMWATER FORCEMAIN
 - CATCH BASIN

NOTE:
1. SEE DRAWING C-001 FOR CIVIL GENERAL NOTES.

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designed	W. BATTEY	checked	B. HANSEN

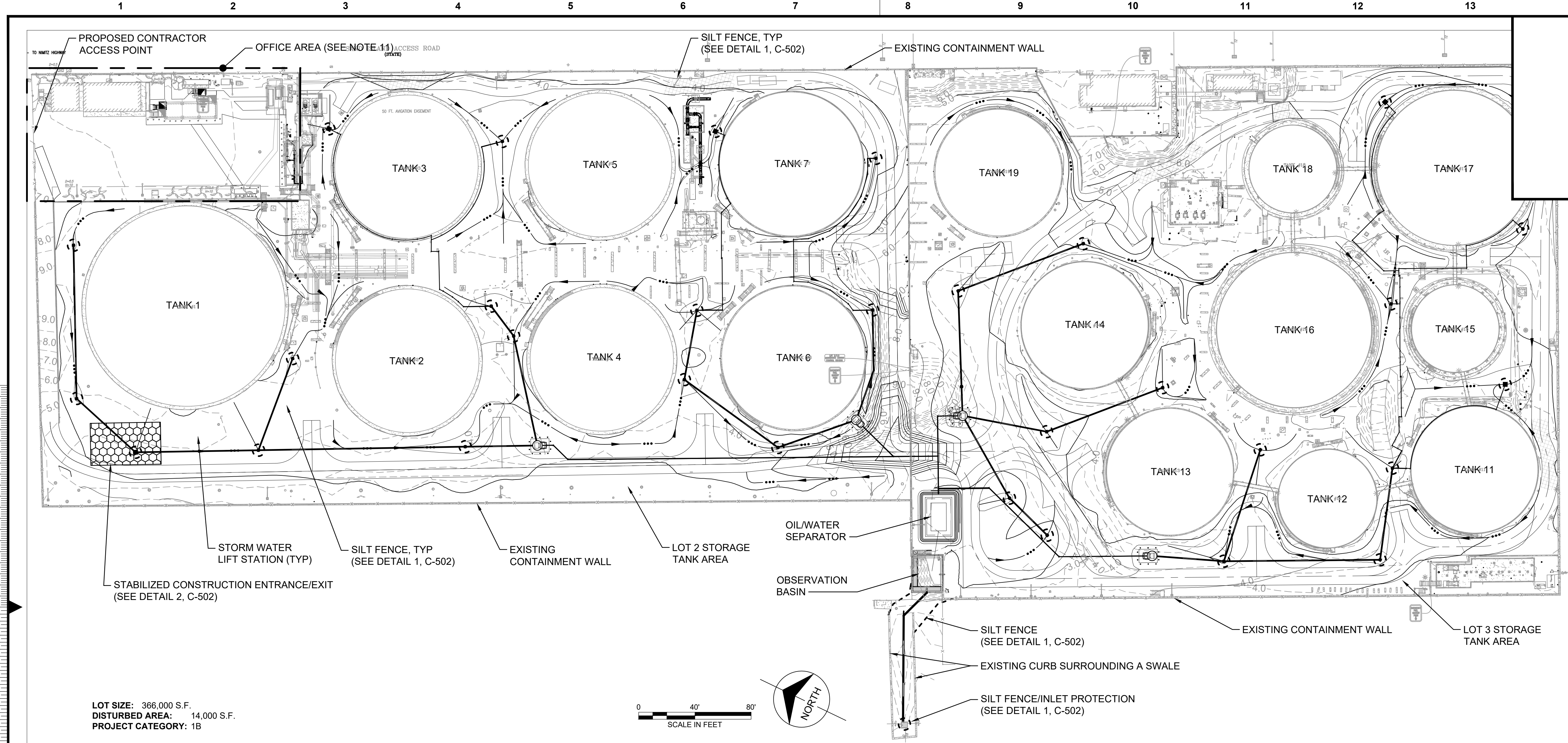
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SAND ISLAND STORMWATER
 GRADING AND UTILITY PLAN - 3

project	131790	contract	
drawing		rev.	

C-113 - A

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B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:

AFFECTED	TAX MAP KEYS
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<input type="checkbox"/>	12025021

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LICENSEE NO. 000165

date	detailed
05/05/2021	J. EICHENBERGER
designed	checked
W. BATTEY	B. HANSEN

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SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL)
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HONOLULU, HI 96819

SAND ISLAND STORMWATER	
EROSION CONTROL PLAN	
project	contract
131790	
drawing	rev.
C-200	A
file 131790_C-200.DWG	

EXISTING CONDITION NOTES:

- THE STORAGE TANK AREA IS SURROUNDED BY A CONCRETE WALL, APPROXIMATELY 4 FT. HIGH, THAT IS DESIGNED TO CONTAIN FUEL SPILLS. THE SURFACING IN THIS AREA IS A COMBINATION OF AGGREGATE SURFACING AND EARTH SURFACING (NON-VEGETATED). AREAS TO BE DISTURBED ARE FOR CONSTRUCTION OF NEW STORM DRAIN PIPING AND STRUCTURES (BELOW-GRADE), AND FOUNDATIONS FOR AN ABOVE-GRADE STRUCTURE.
- THE OFFICE AREA IS ELEVATED ABOUT 4 FT. ABOVE THE STORAGE TANK AREA, AND IS ASPHALT-SURFACED. AREAS TO BE DISTURBED ARE FOR THE REMOVAL ASPHALT PAVEMENT TO INSTALL REINFORCED CONCRETE BUILDING AND GENERATOR FOUNDATIONS, AND UNDERGROUND ELECTRICAL DUCTBANK

EROSION CONTROL NOTES:

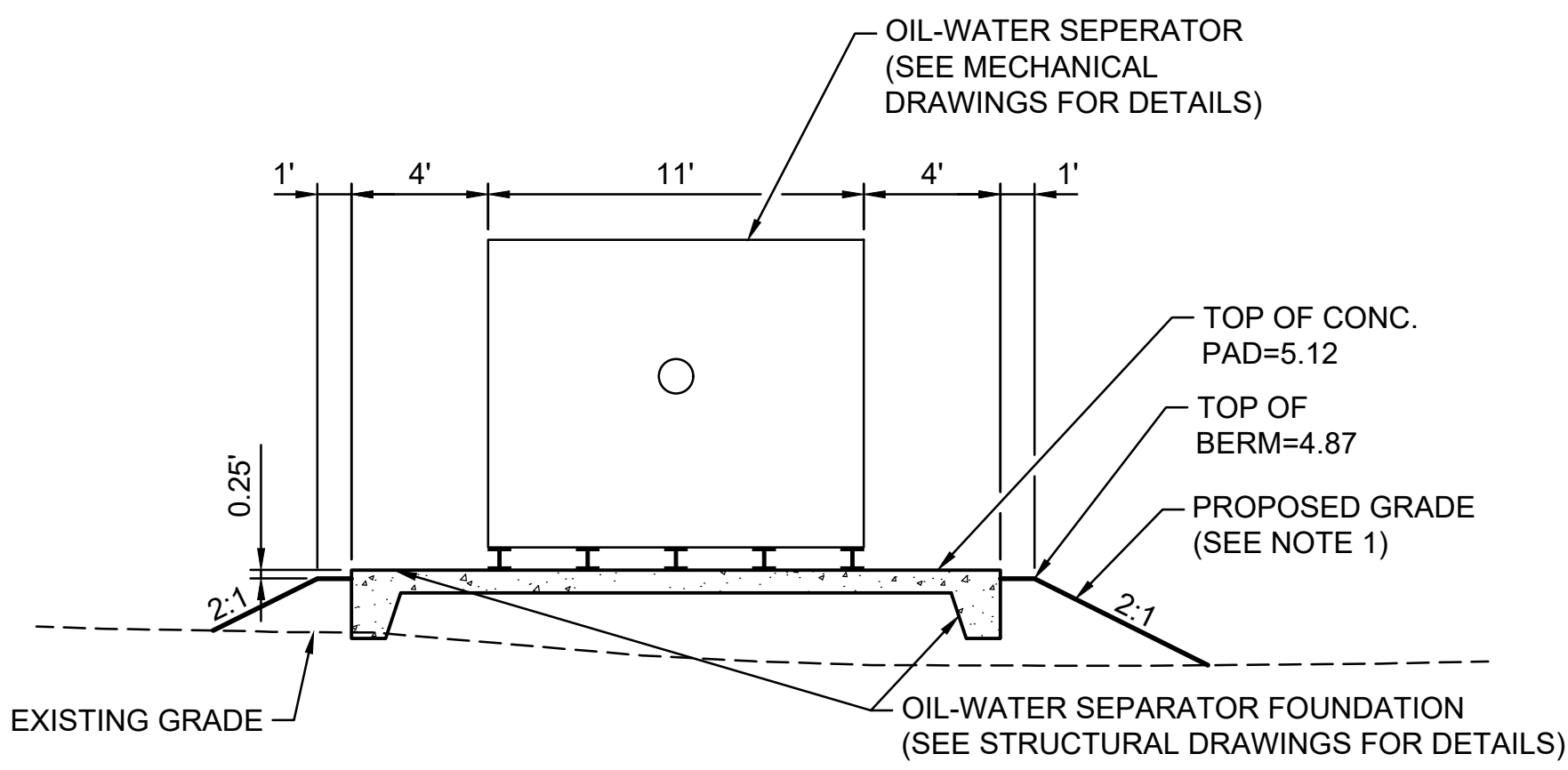
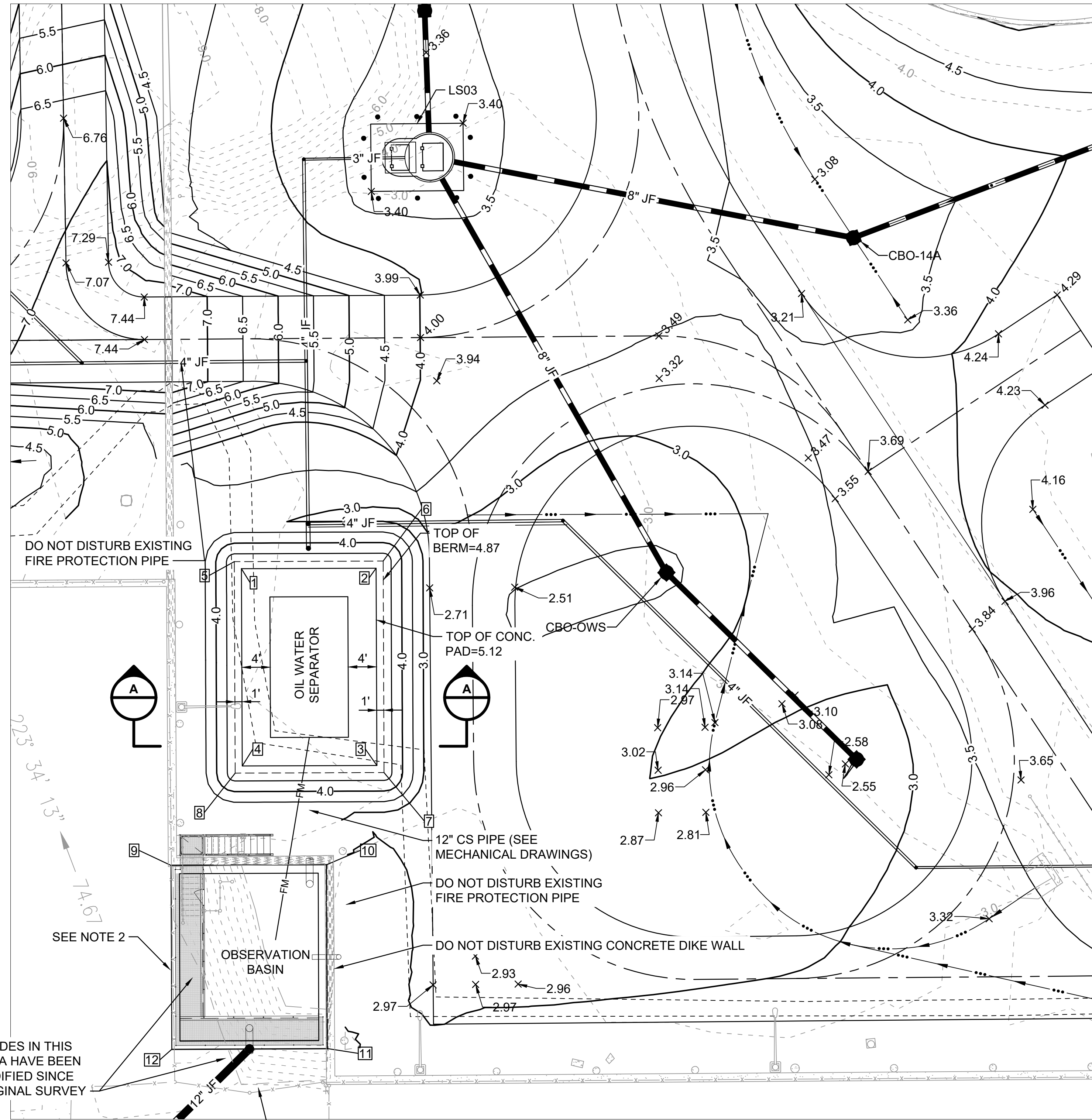
- SEE THE CITY AND COUNTY OF HONOLULU CONSTRUCTION STORM WATER BEST MANAGEMENT PRACTICE MANUAL DATED FOR NOVEMBER 2011 FOR EROSION AND SEDIMENT CONTROL INSTALLATION AND MATERIALS GUIDELINES.
- CONSTRUCTION ACTIVITY POLLUTION PREVENTION IS REQUIRED FOR THIS PROJECT. PREVENTION OF POLLUTION RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE ACCOMPLISHED BY CONTROLLING SOIL EROSION, WATERWAY SEDIMENTATION, AND AIRBORNE DUST GENERATION. SUBCONTRACTOR SHALL ENSURE THAT NO SEDIMENT RESULTING FROM CONSTRUCTION ACTIVITIES INFRINGES ONTO ADJACENT PROPERTIES. SUBCONTRACTOR SHALL COORDINATE EROSION AND SEDIMENT CONTROL WITH OTHER CONSTRUCTION ENTITIES PERFORMING WORK ON ADJACENT PROPERTIES.
- ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES. PRIOR TO INITIATING CONSTRUCTION IN AN AREA, ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE. UPON PROJECT COMPLETION ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.
- ALL BMP CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY RAINFALL EVENT OF 0.5 INCHES OR GREATER WITHIN A 24 HOUR PERIOD. ALL CONTROL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 48 HOURS AFTER INSPECTION. BUILT-UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
- SUBCONTRACTOR SHALL UTILIZE THE CONSTRUCTION SITE BMPS WEEKLY CHECKLIST PROVIDED IN APPENDIX D OF THE CITY AND COUNTY OF HONOLULU STORM WATER MANAGEMENT PROGRAM PLAN.
- THE PROJECT SITE IS PRIMARILY LOCATED WITHIN A FUEL STORAGE TANK CONCRETE DIKE WALL CONTAINMENT SYSTEM.
- IN ACCORDANCE WITH CHAPTER 11-60.1, AIR POLLUTION CONTROL, TITLE 11, HAWAII ADMINISTRATIVE RULES, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EFFECTIVE CONTROL MEASURES ARE PROVIDED TO PREVENT OR MINIMIZE ANY VISIBLE DUST EMISSIONS CAUSED BY THE CONSTRUCTION WORK IMPACTING THE SURROUNDING AREAS INCLUDING THE OFF-SITE ROADWAYS USED TO ENTER/EXIT THE PROJECT AREAS. THESE MEASURES INCLUDE BUT NOT LIMITED TO THE USE OF WATER TRUCK WAGONS, SPRINKLER SYSTEMS, DUST FENCES, ETC.

- IN ACCORDANCE WITH CHAPTER 11-55, WATER POLLUTION CONTROL AND CHAPTER 11-54, WATER QUALITY STANDARDS, TITLE 11, HAWAII ADMINISTRATIVE RULES, THE PROPERTY OWNER/PROJECT DEVELOPER AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE BEST MANAGEMENT PRACTICES (BMP) TO PREVENT OR MINIMIZE THE DISCHARGE OF SEDIMENTS, DEBRIS AND OTHER WATER POLLUTANTS INTO STATE RECEIVING WATERS IS PROVIDED AT ALL TIMES
- IN ACCORDANCE WITH CHAPTER 11-58, SOLID WASTE CONTROL, TITLE 11, HAWAII ADMINISTRATIVE RULES, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT GRUB MATERIALS, DEMOLITION WASTE AND CONSTRUCTION MATERIAL WASTE GENERATED BY THE PROJECT ARE DISPOSED OF IN A MANNER OR AT A SITE APPROVED BY THE STATE DEPARTMENT OF HEALTH.
- THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS FROM THE DEPARTMENT OF HEALTH INCLUDING BUT NOT LIMITED TO NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES), NOTICE OF INTENT AND GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, HYDROTESTING AND DEWATERING DISCHARGES PRIOR TO COMMENCING CONSTRUCTION.
- ANY MATERIAL STOCKPILES IN THE OFFICE AREA SHALL BE COVERED WITH PLASTIC THAT IS SECURED WITH SANDBAGS. SEE ADDITIONAL INFORMATION ON DRAWING C-101.
- SEE DRAWING C-002 FOR ALL OTHER GENERAL EROSION CONTROL NOTES.

LEGEND:

- 4.0 — EXISTING CONTOURS
- 6.0 — PROPOSED CONTOURS
- - - - - SILT FENCE
- [Pattern] STABILIZED CONSTRUCTION ENTRANCE/EXIT
- - - - - GRADING/DISTURBED AREA LIMITS
- > FLOWLINE

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SECTION A
SCALE IN FEET

POINT TABLE				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	54746.29	1677645.09	5.12	TOP/CONC PAD
2	54729.19	1677653.38	5.12	TOP/CONC PAD
3	54717.05	1677628.33	5.12	TOP/CONC PAD
4	54734.15	1677620.04	5.12	TOP/CONC PAD
5	54747.63	1677645.55	4.87	TOP GRADE/BERM
6	54728.73	1677654.71	4.87	TOP GRADE/BERM
7	54715.72	1677627.86	4.87	TOP GRADE/BERM
8	54734.61	1677618.70	4.87	TOP GRADE/BERM
9	54737.14	1677603.05	9.48	TOP OUTSIDE CORNER/ BASIN
10	54717.41	1677612.60	9.48	TOP OUTSIDE CORNER/ BASIN
11	54706.11	1677589.28	9.48	TOP OUTSIDE CORNER/ BASIN
12	54725.83	1677579.72	9.48	TOP OUTSIDE CORNER/ BASIN

- NOTES:**
- INSTALL GEOCELL ON ALL SIDE-SLOPES AND TOP OF OIL WATER SEPARATOR ACCESS. GEOCELL SHALL BE PRESTO GEOSYSTEMS GEOWEB NO. GW30J, 4" DEPTH. GEOTEXTILE UNDER GEOCELL SHALL BE PER SPECIFICATION. AGGREGATE FILL FOR THE GEOCELL SHALL BE SIZE 57 PER SPECIFICATION. GEOCELL AND GEOTEXTILE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - REMOVE AND REPLACE EXISTING CHAIN LINK FENCE AS REQUIRED TO CONSTRUCT OBSERVATION BASIN. COORDINATE TEMPORARY SECURITY MEASURES WITH CONTRACTOR.

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR
TMK REFERENCE LOCATIONS:
AFFECTED TAX MAP KEYS
 12025020
 12025021

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KANSAS CITY, MO 64114
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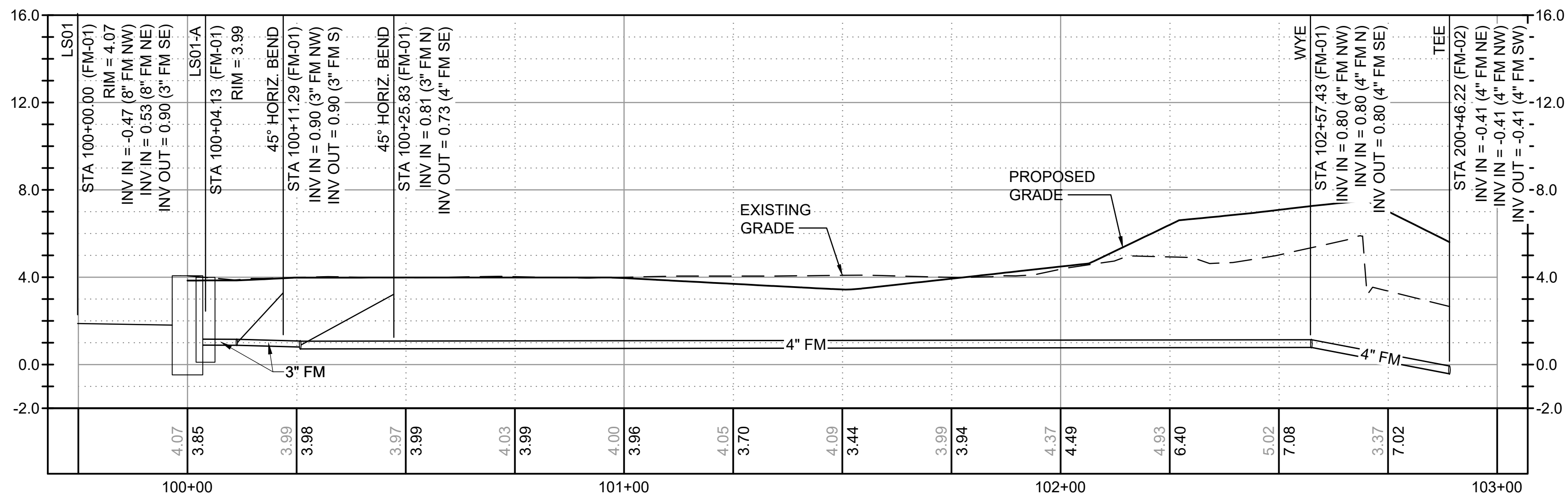
date	05/05/2021	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

HAWAII FUELING FACILITIES CORPORATION (HFFC)
SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819

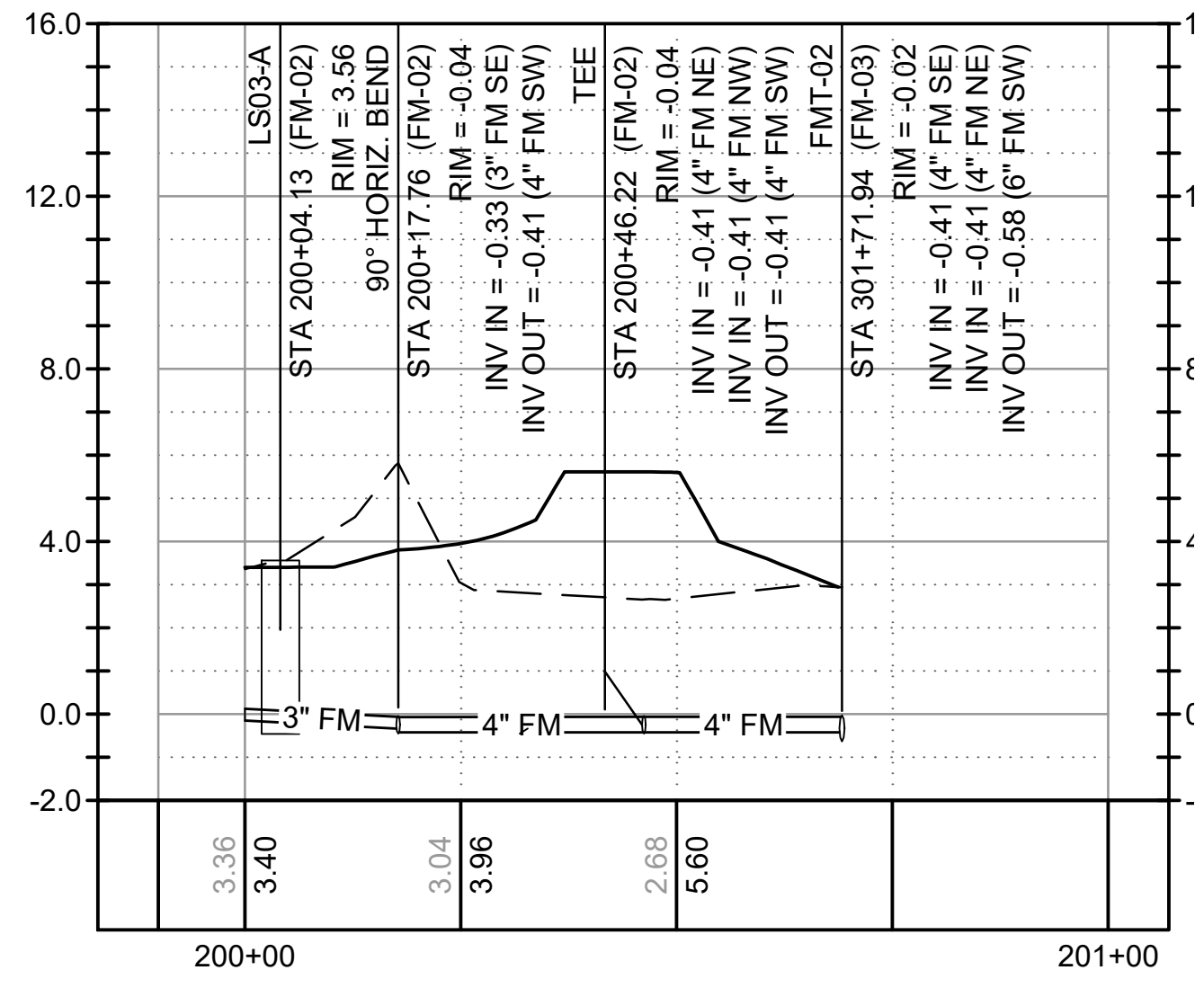
SAND ISLAND STORMWATER GRADING ENLARGEMENT PLAN

project	131790	contract	
drawing	C-201	rev.	A

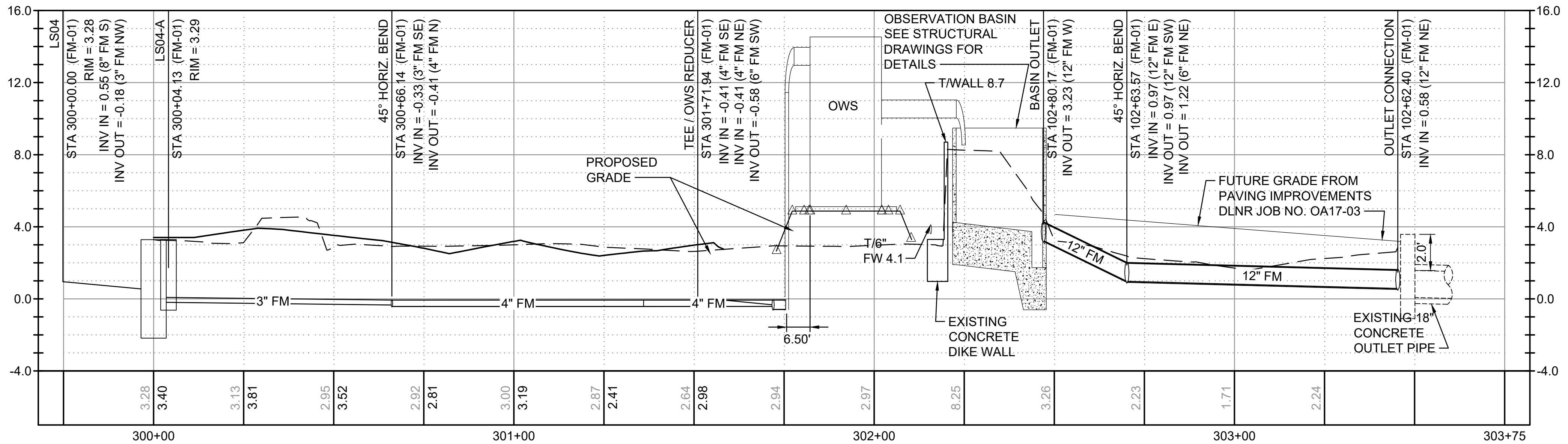
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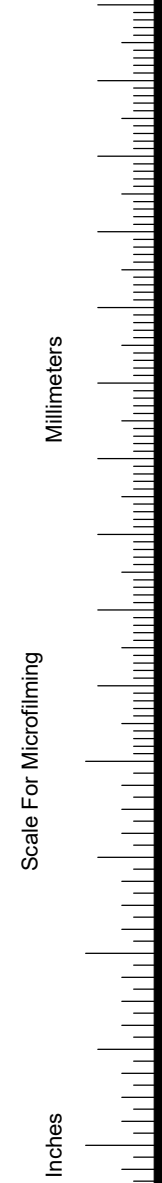
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C-102



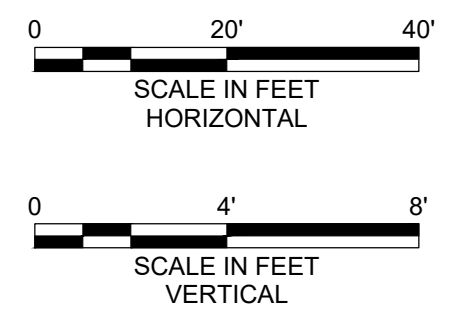
PROFILE FM-02 3
C-103



PROFILE FM-03 4
C-103



no.	date	by	ckd	description
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AFFECTED TAX MAP KEYS
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date	05/05/2021	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

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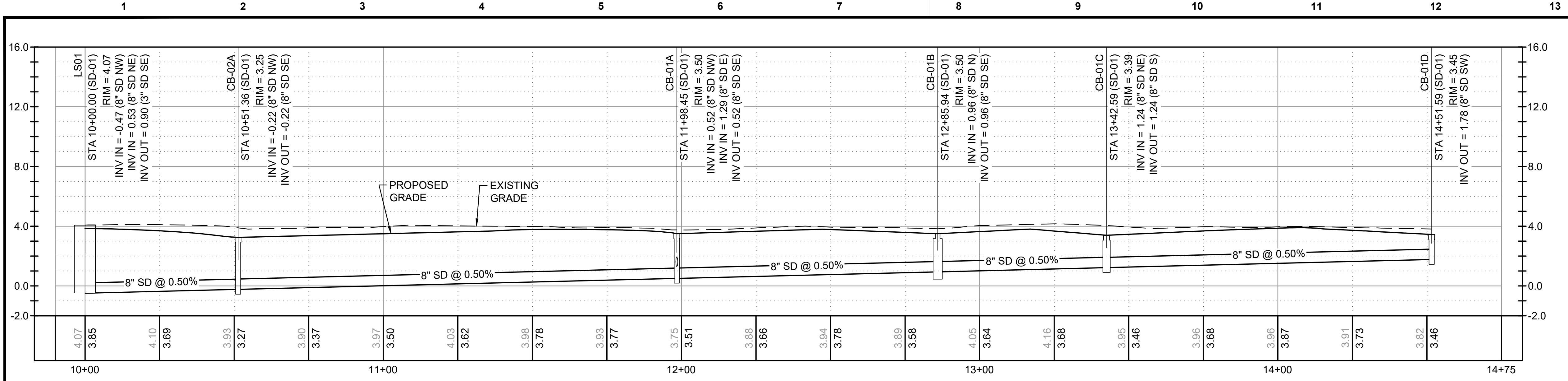
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SAND ISLAND STORMWATER

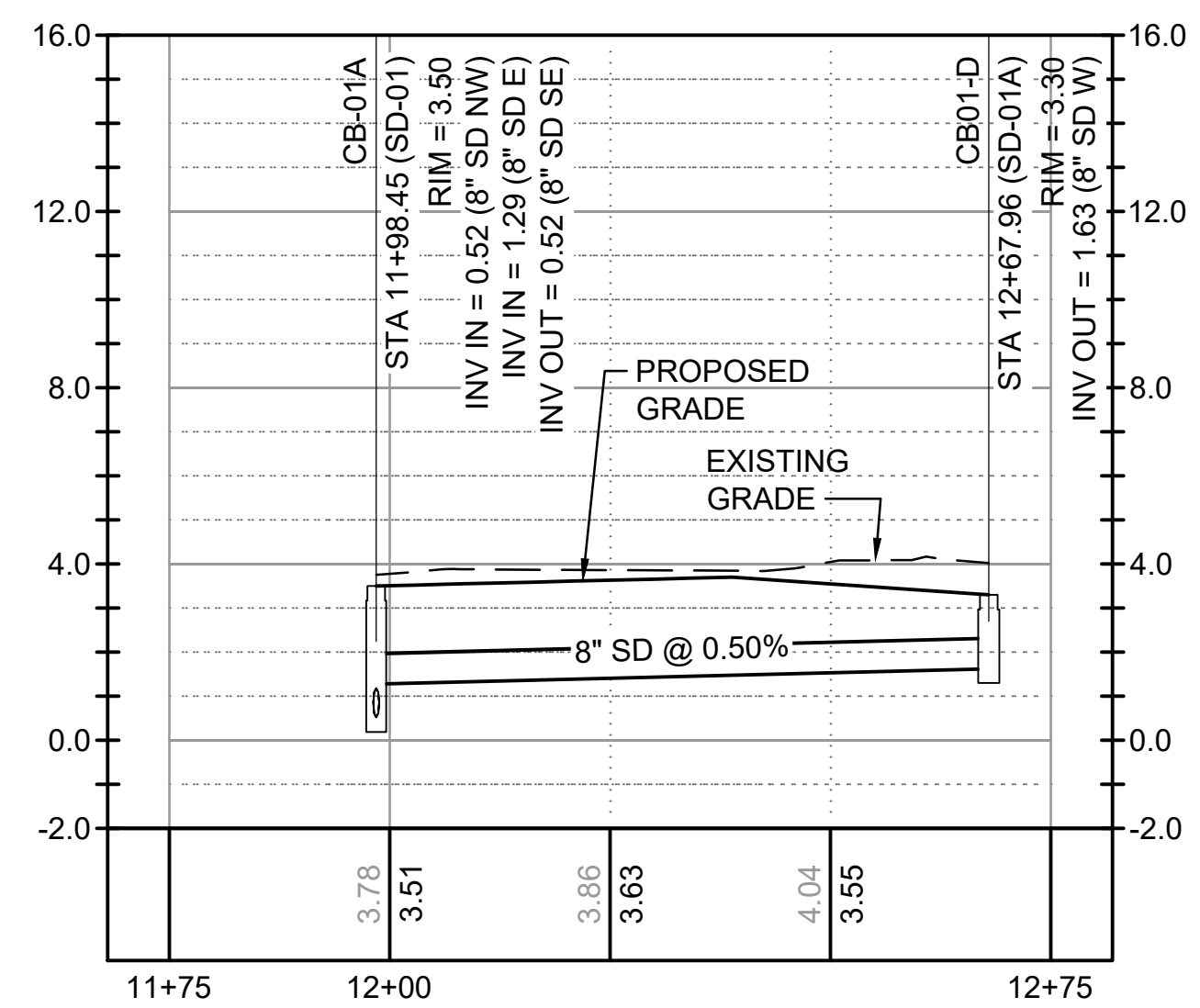
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project	131790	contract	
drawing	C-301 - A		rev.

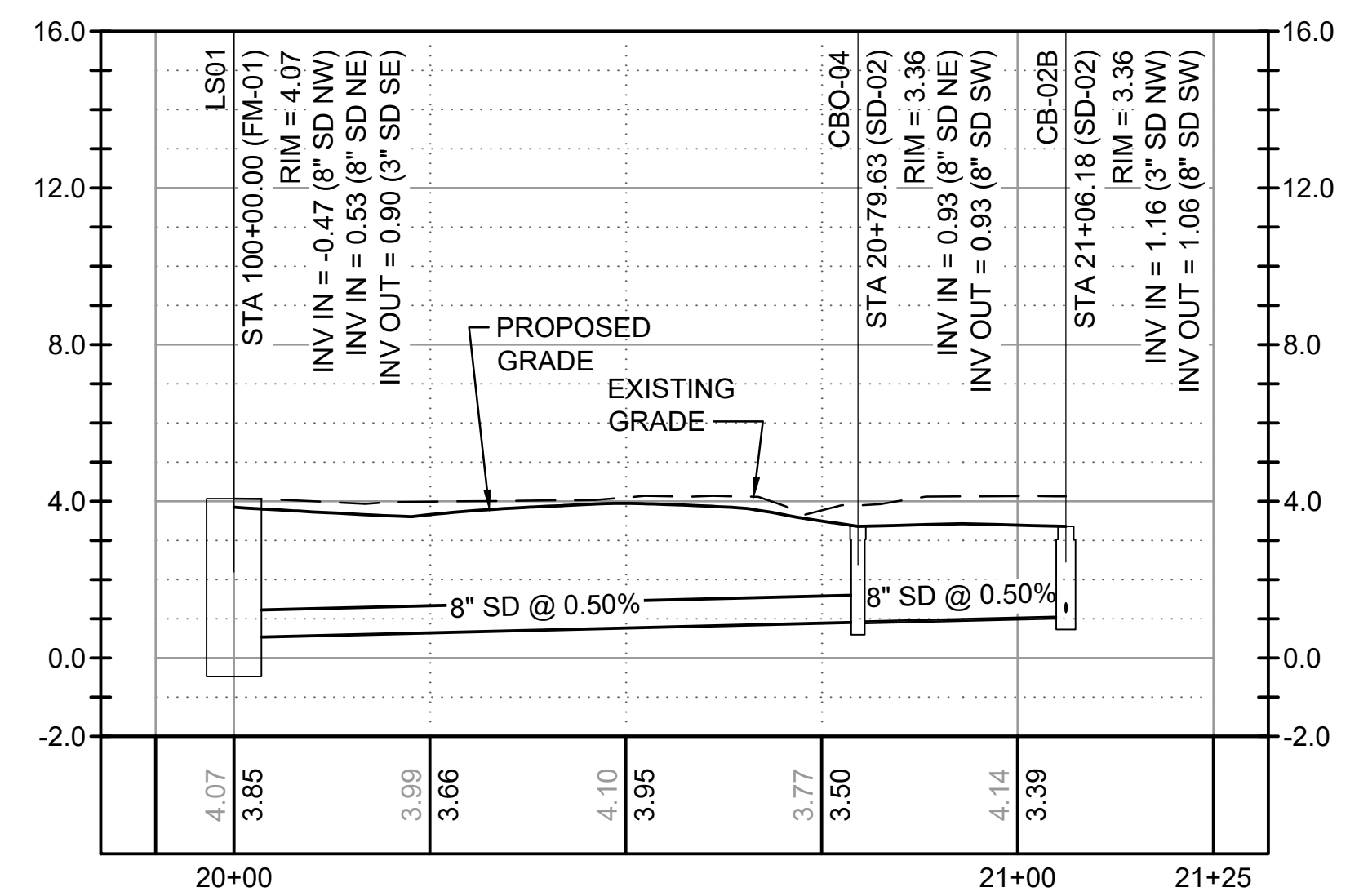
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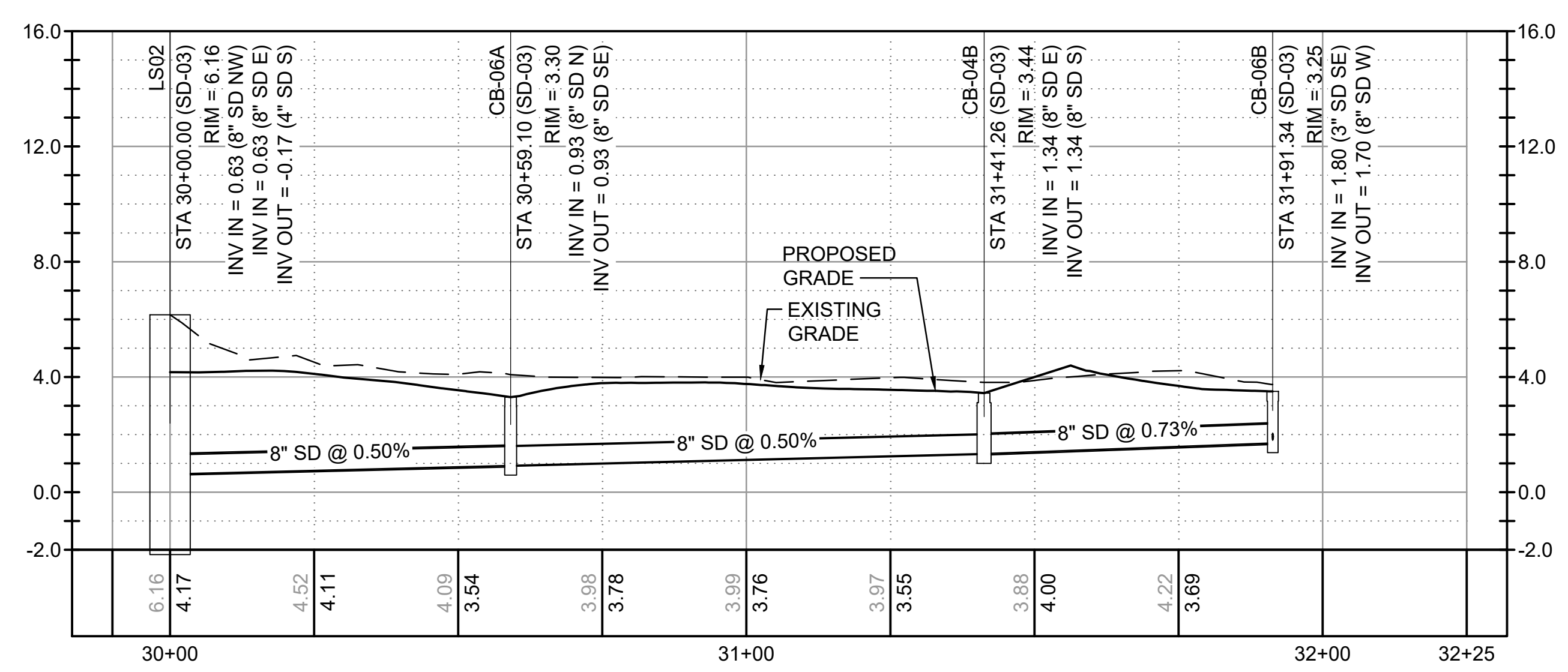
PROFILE SD-01 1
C-102



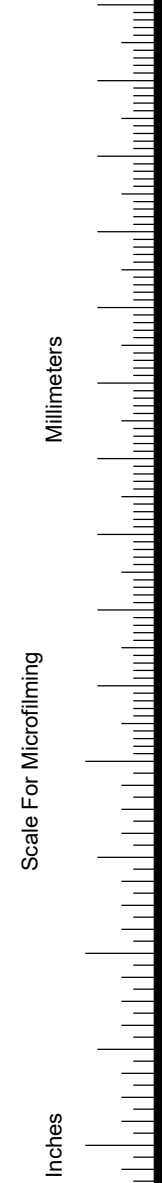
PROFILE SD-01A 2
C-102



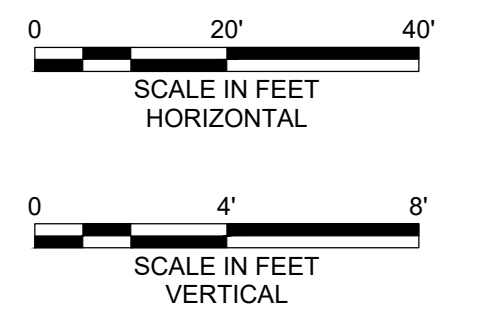
PROFILE SD-02 3
C-102



PROFILE SD-03 5
C-102



no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
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SEE SHEET G-101 FOR
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designed	W. BATTEY	checked	B. HANSEN

HAWAII FUELING FACILITIES CORPORATION (HFFC)

SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL)
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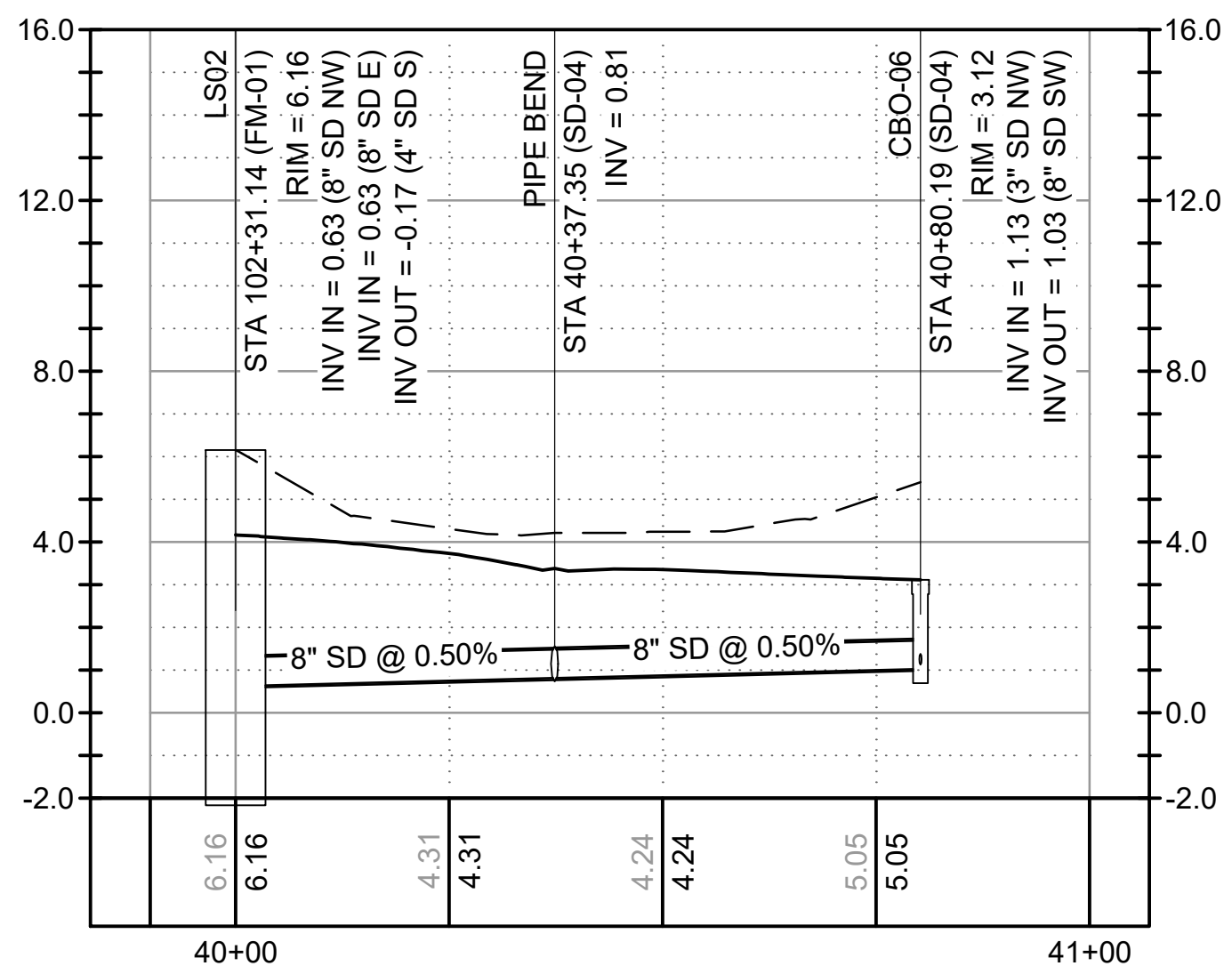
SAND ISLAND STORMWATER

 CIVIL PROFILES - 2

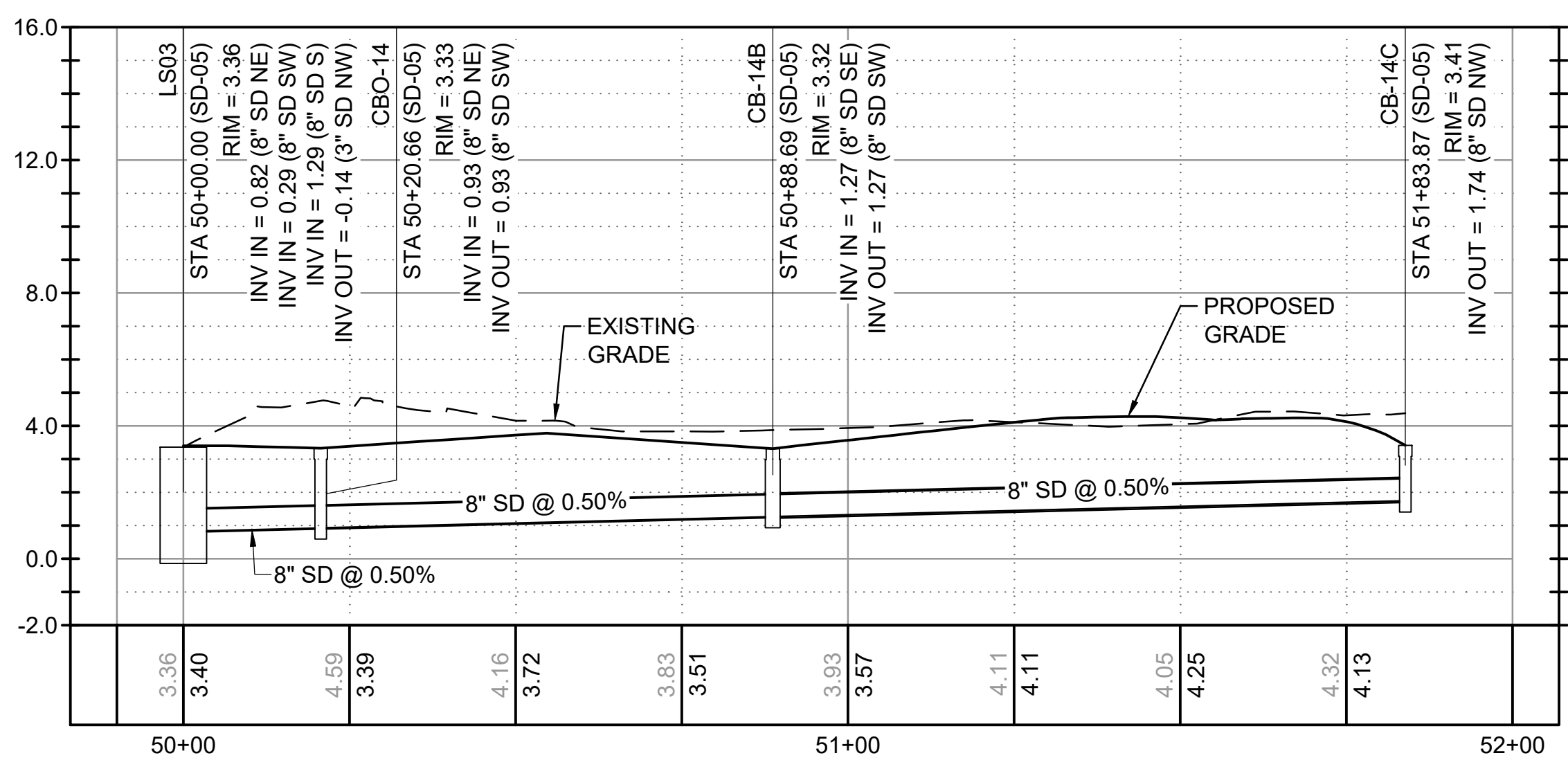
project	131790	contract	
drawing	C-302	rev.	A

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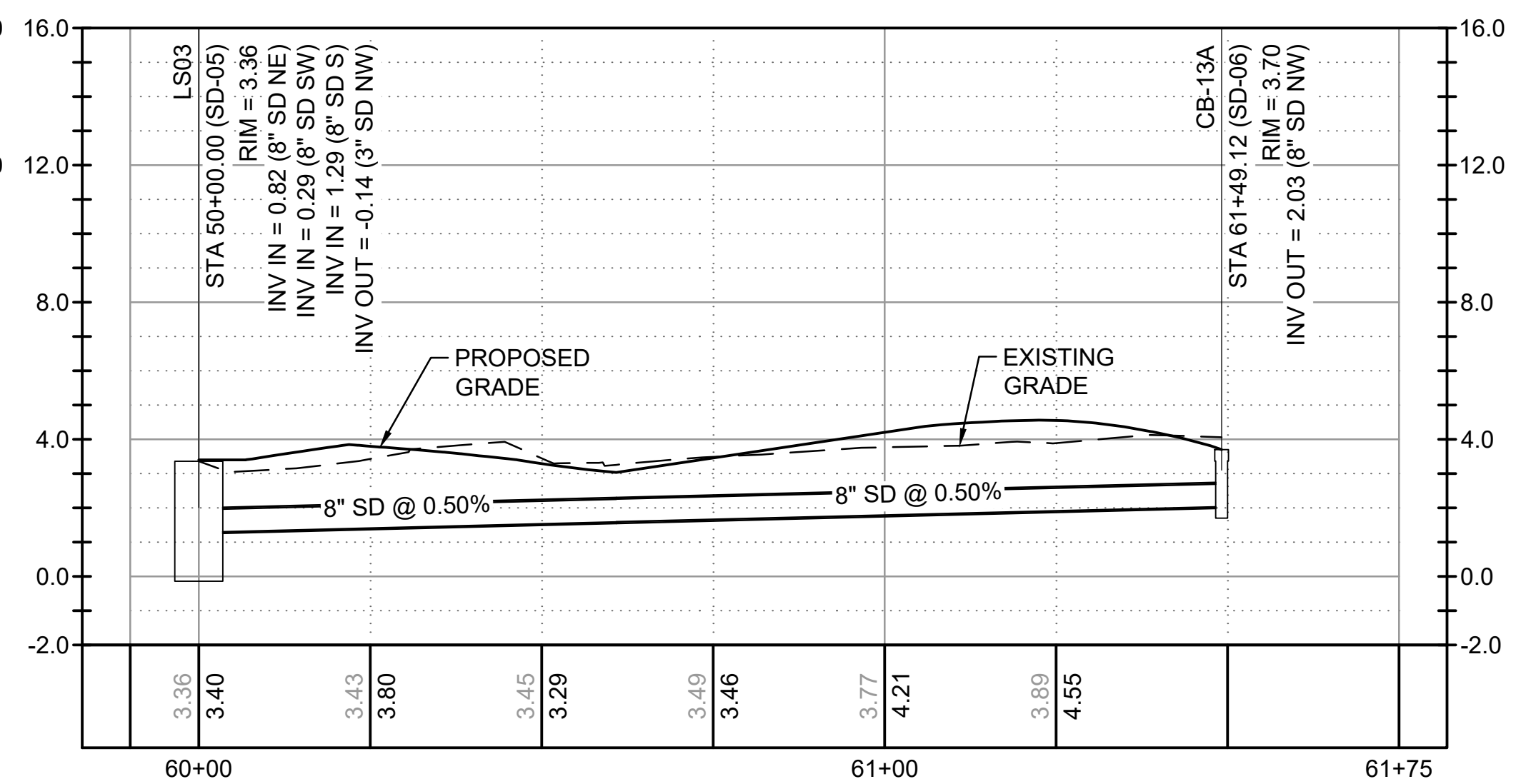
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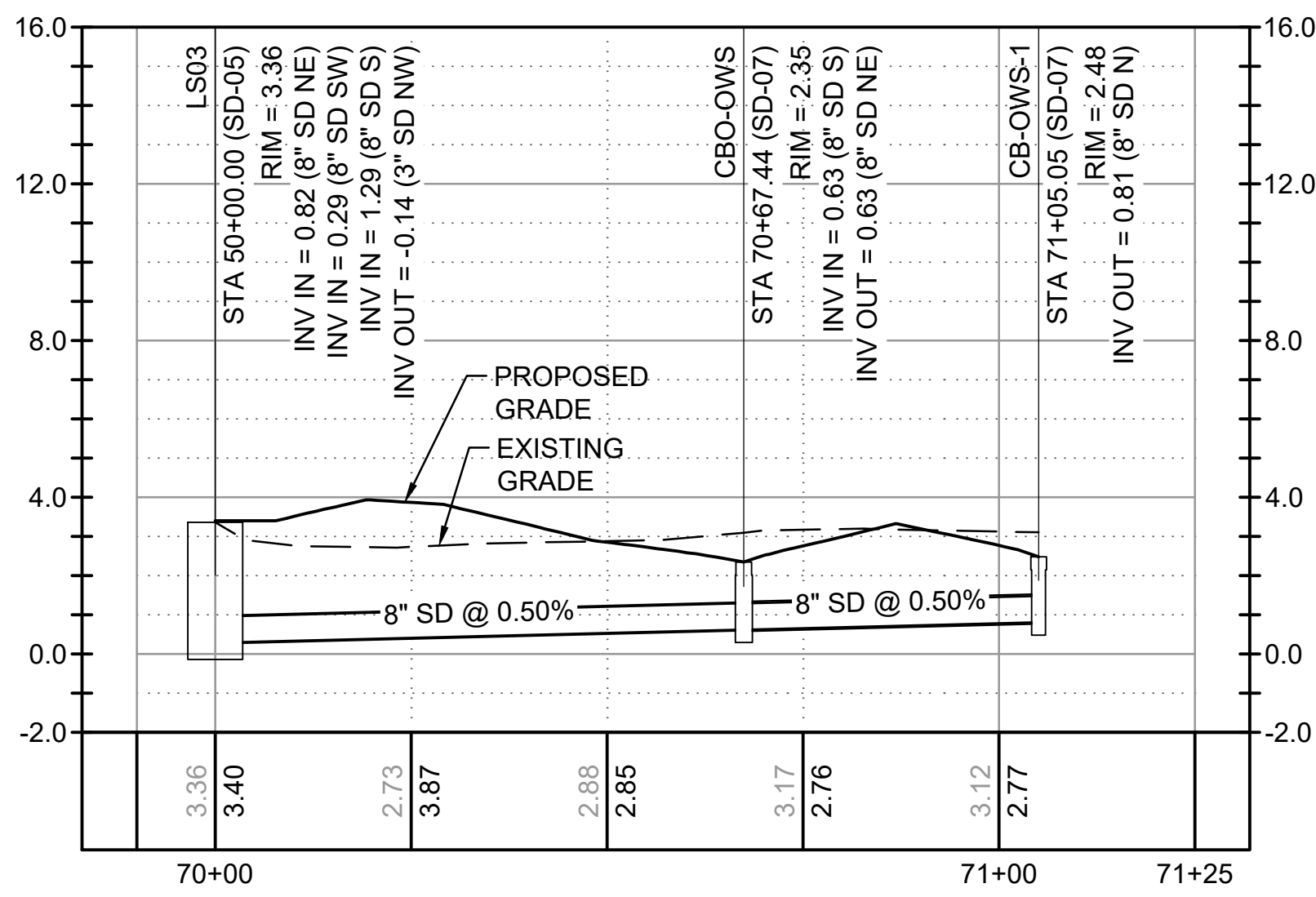
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PROFILE SD-05 2
C-103

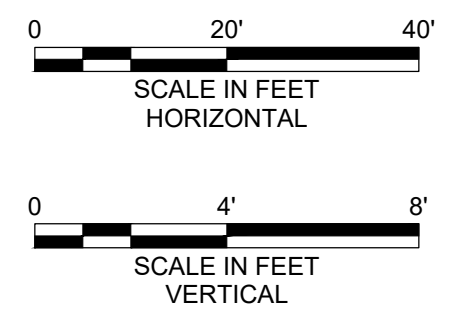


PROFILE SD-06 4
C-103



PROFILE SD-07 3
C-103

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT



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AFFECTED TAX MAP KEYS
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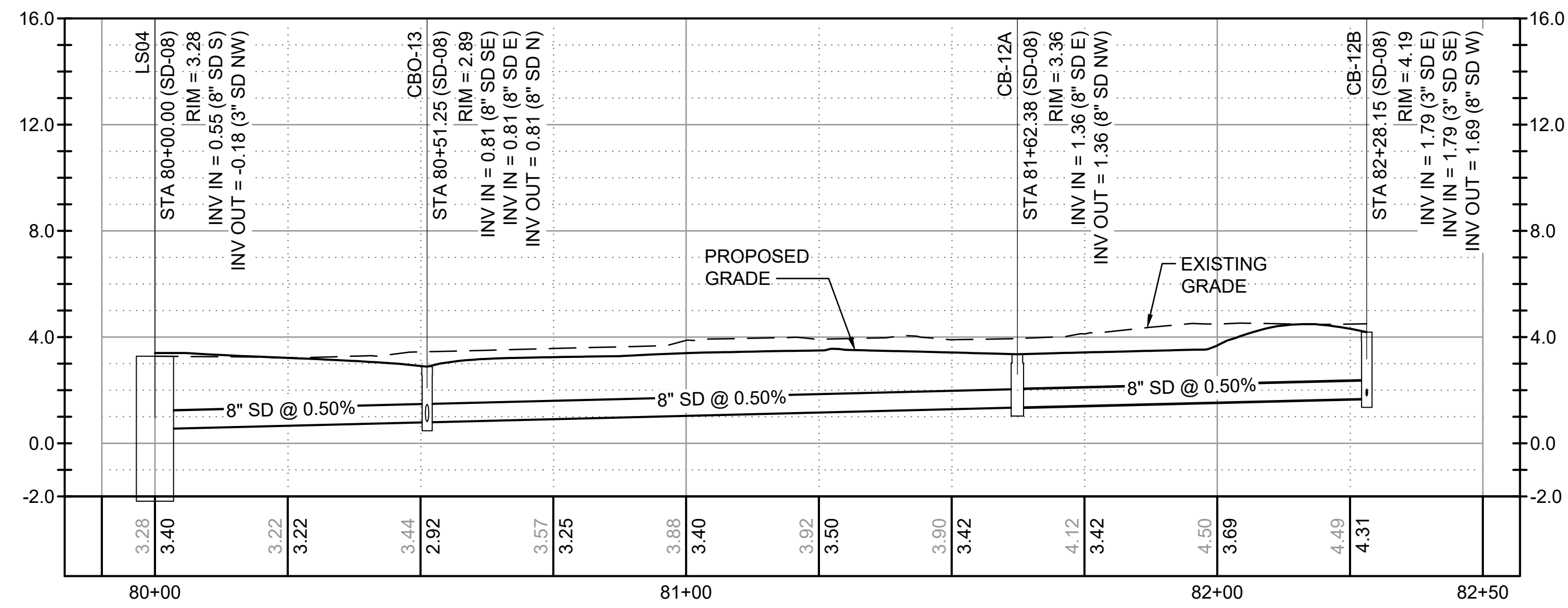
date	05/05/2021	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	B. HANSEN

HAWAII FUELING FACILITIES CORPORATION (HFFC)

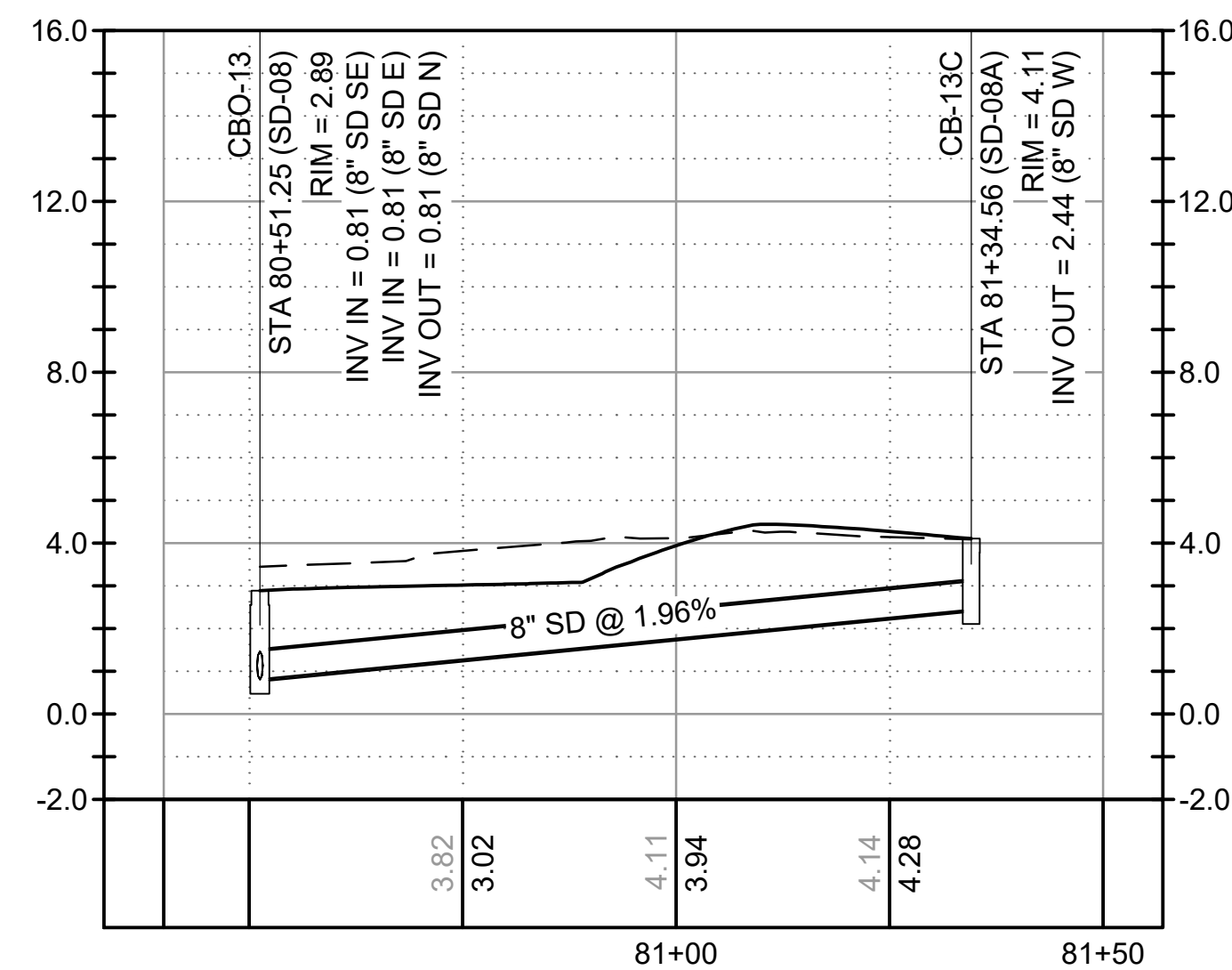
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SAND ISLAND STORMWATER	
CIVIL PROFILES - 3	
project	contract
131790	
drawing	rev.
C-303	A
file 131790_C-301.DWG	

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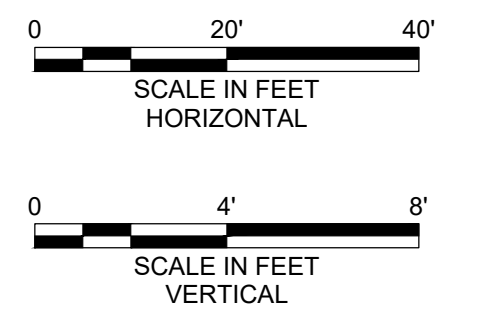
PROFILE SD-08 1
C-103



PROFILE SD-08A 3
C-103



no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT



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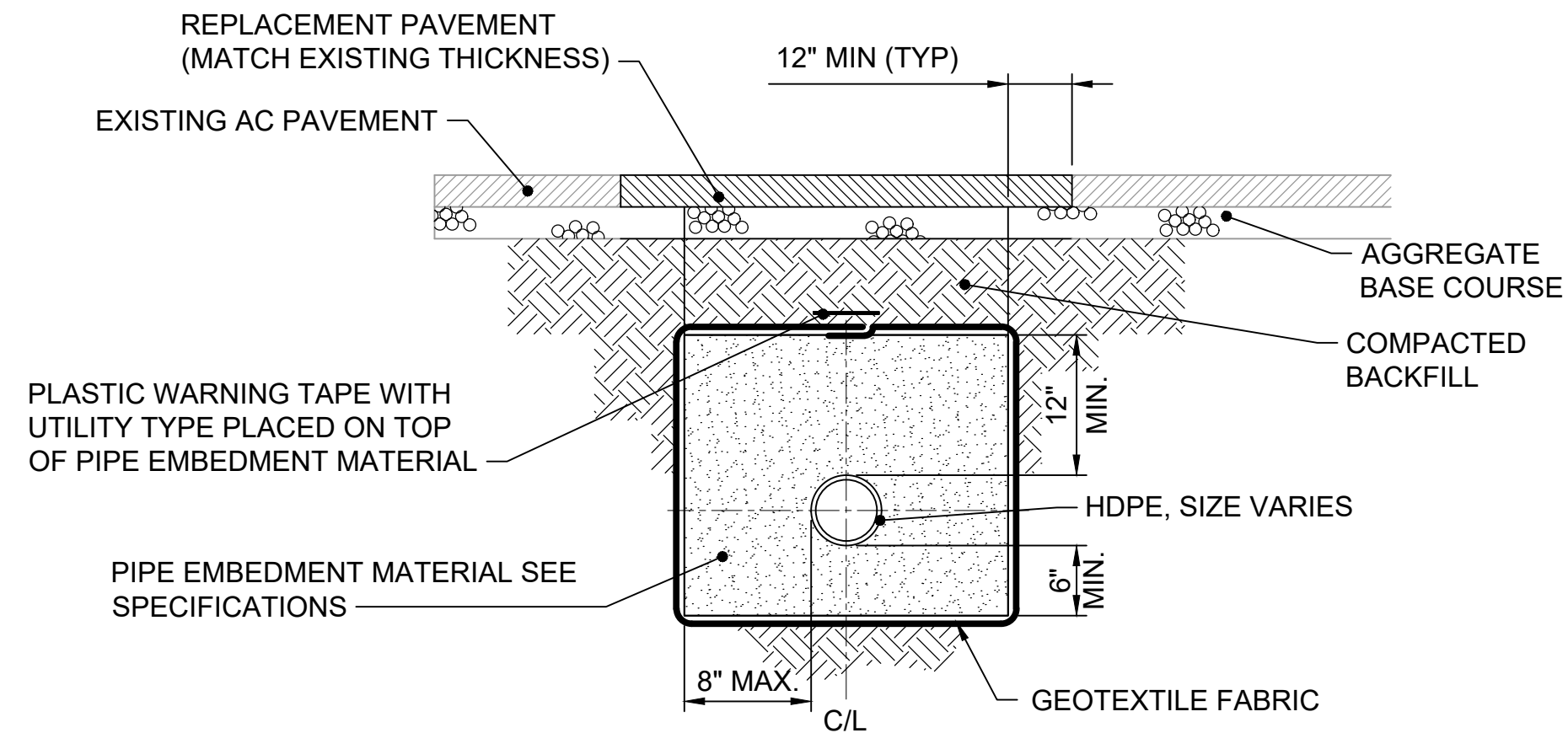
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date	05/05/2021	detailed	J. EICHENBERGER
designed	W. BATTEY	checked	

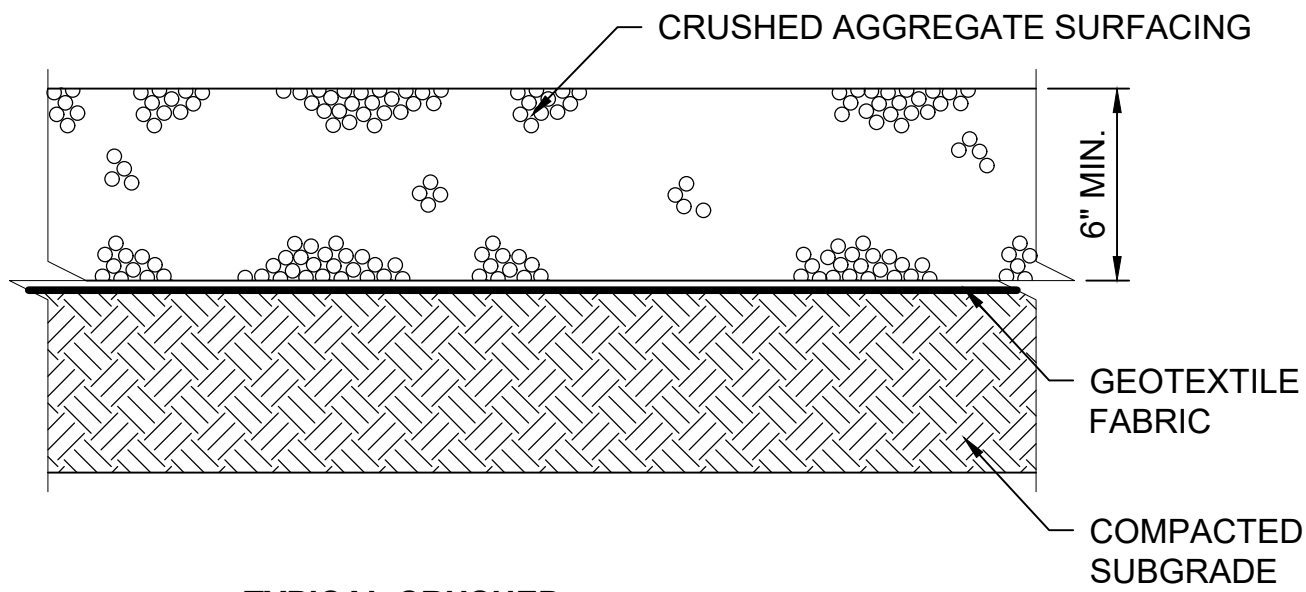
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SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819

SAND ISLAND STORMWATER	
CIVIL PROFILES - 4	
project	contract
131790	
drawing	rev.
C-304	A
file 131790_C-301.DWG	

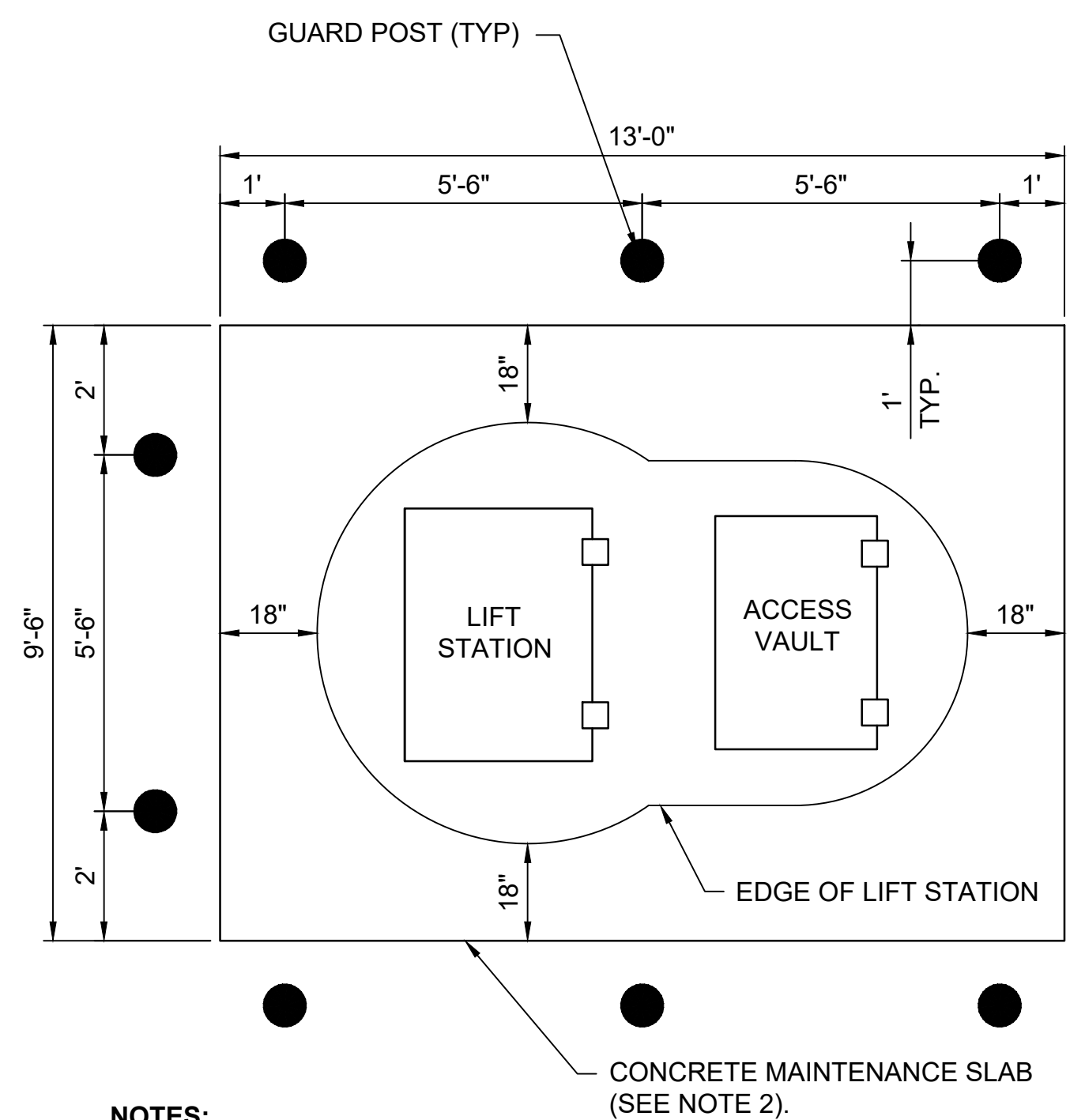
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TYPICAL TRENCH DETAIL AT ASPHALT ROAD CROSSING
NOT TO SCALE

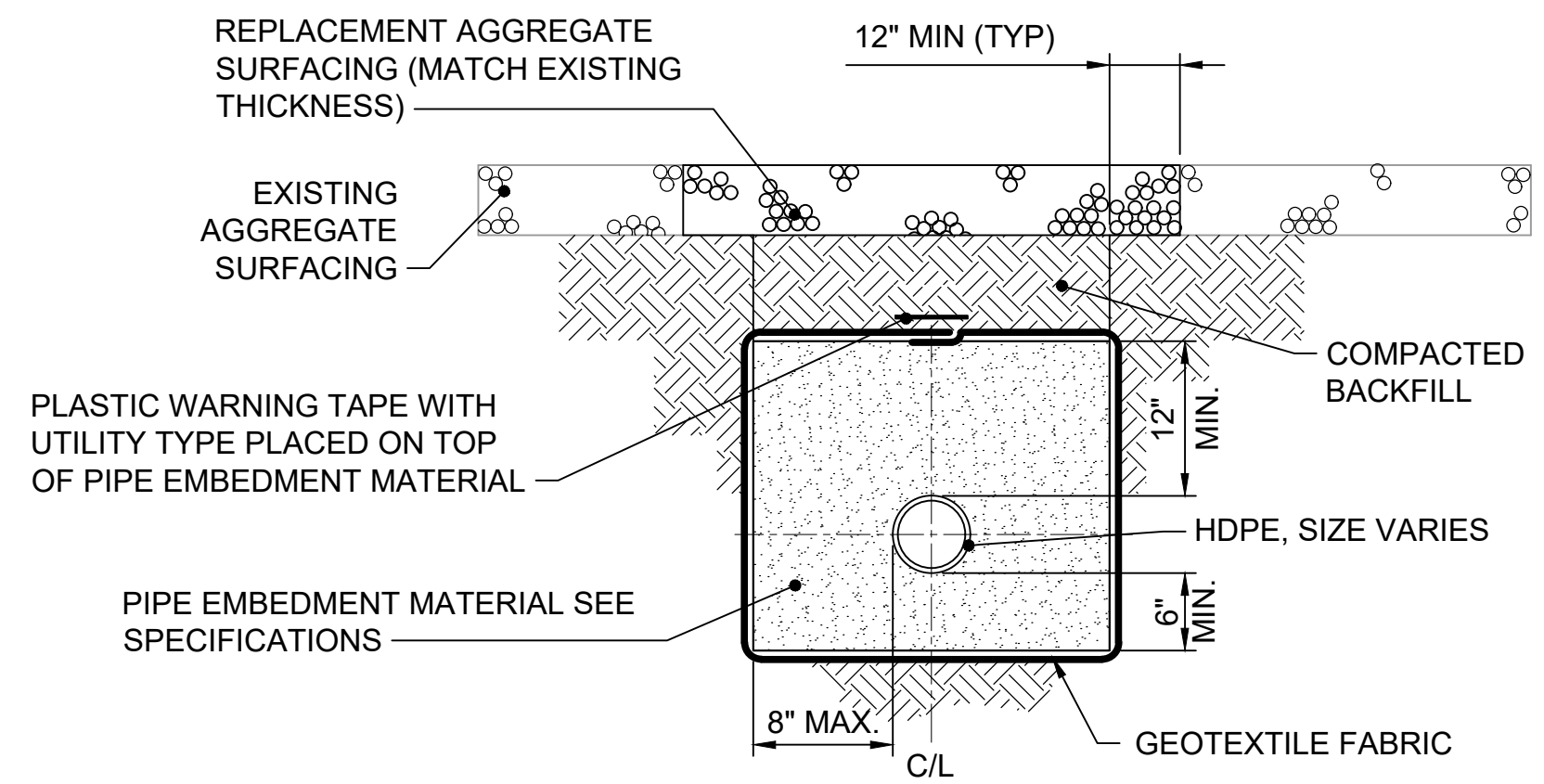


TYPICAL CRUSHED AGGREGATE SURFACING
NOT TO SCALE

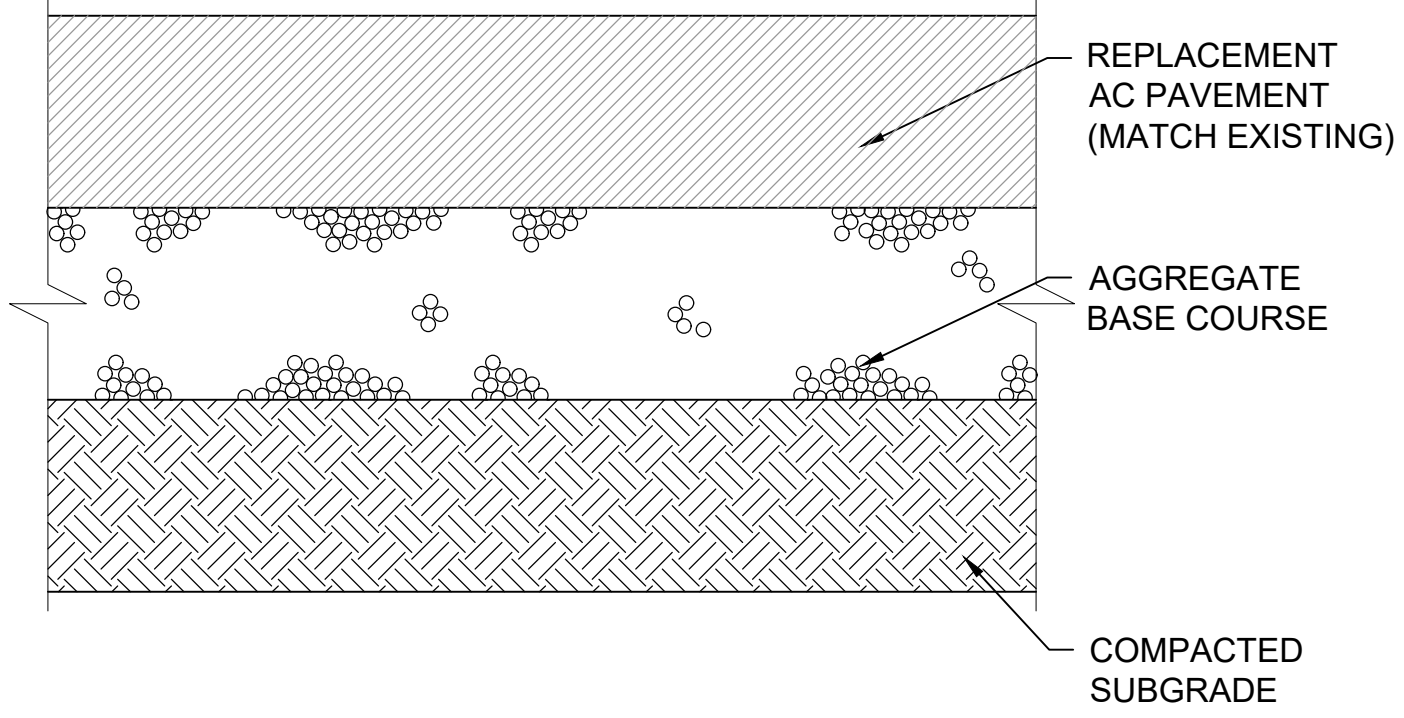


- NOTES:**
- SEE SPECIFICATION NOTES ON DRAWING C-001.
 - CONCRETE MAINTENANCE SLAB SHALL BE 8" THICK, CONFORMING TO SPECIFICATION SECTION 033000. REINFORCE WITH #4 DEFORMED BARS SPACED AT 9" ON-CENTER, EACH WAY.
 - PROVIDE PROVISIONS TO PREVENT CONCRETE MAINTENANCE SLAB FROM BONDING TO LIFT STATION STRUCTURE. (SEE DRAWING M-501).

TYPICAL GUARD POST SPACING DETAIL
NOT TO SCALE

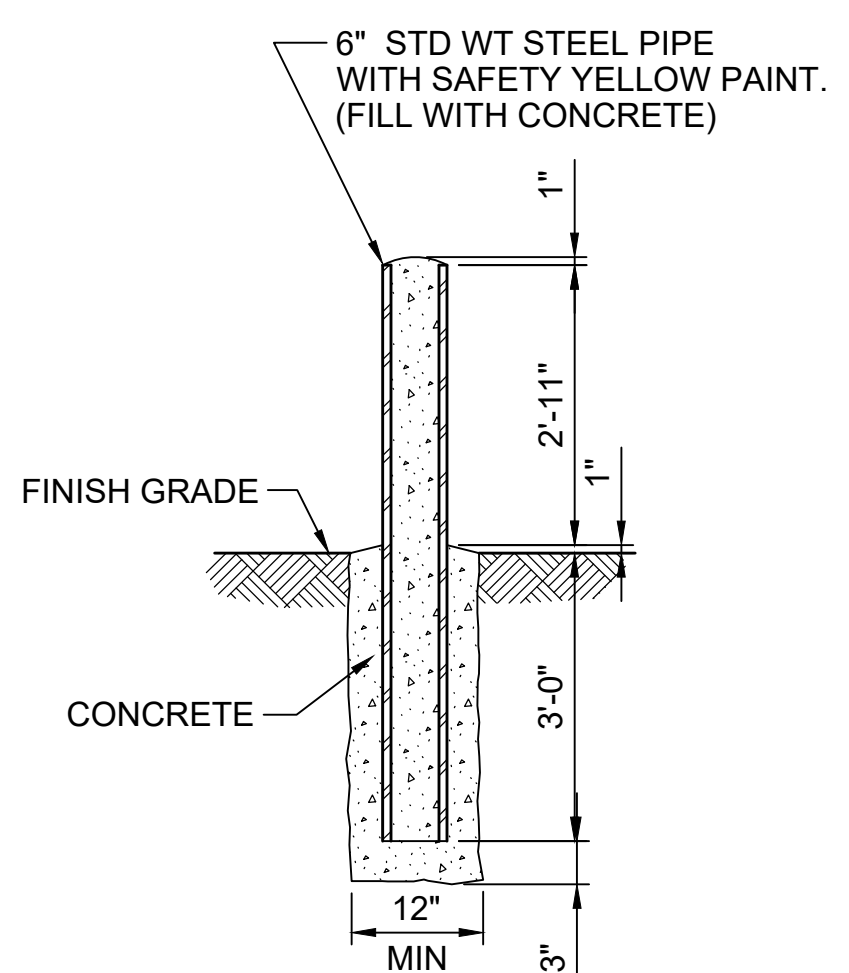


TYPICAL TRENCH DETAIL FOR NON-ROAD AREAS
NOT TO SCALE



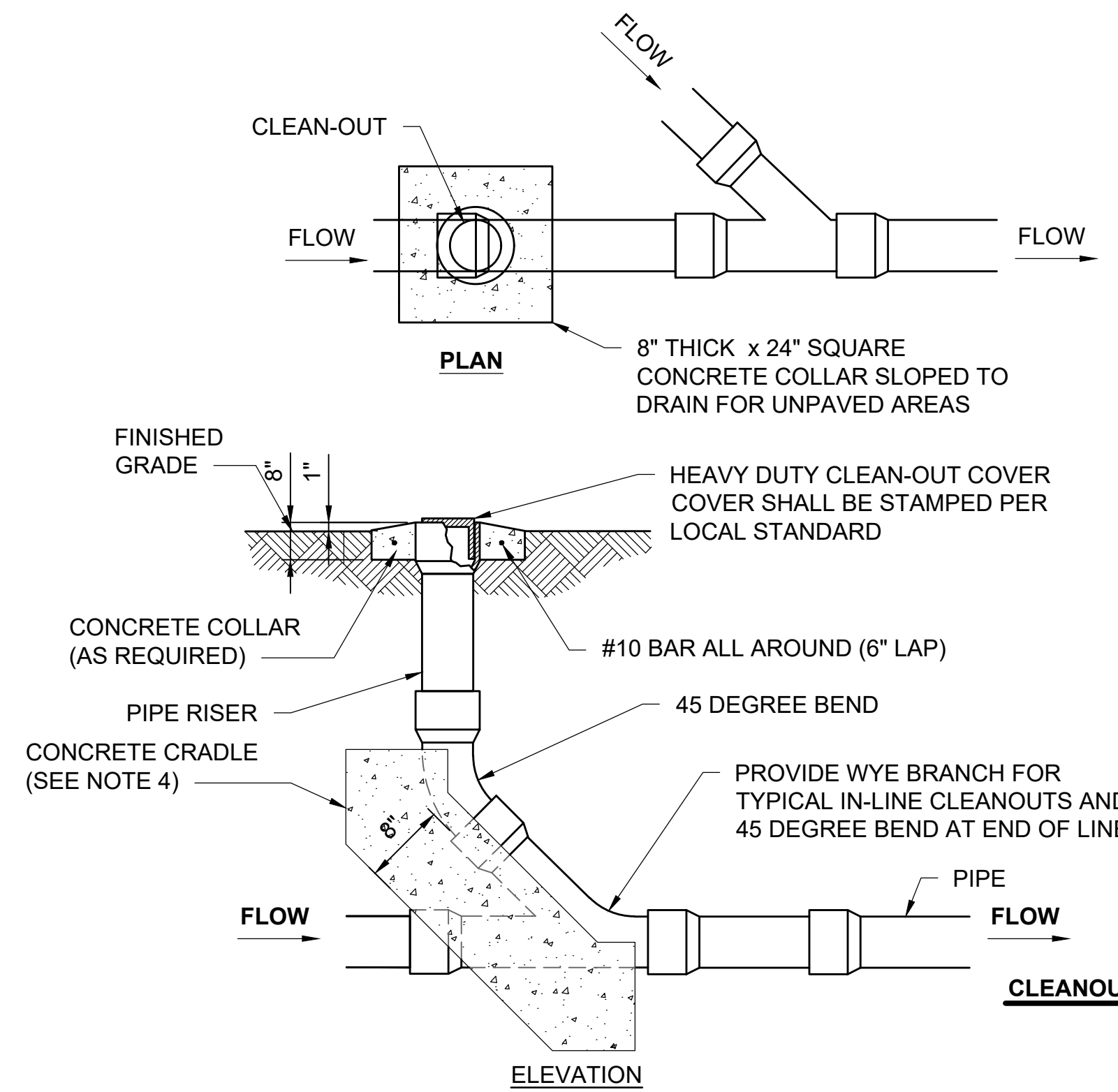
TYPICAL AC PAVEMENT
NOT TO SCALE

Scale For Microfinishing
Millimeters
Inches



NOTE:
PREPARE SURFACE IN FIELD BY SSPC-SP3 METHODS TO SSPC-SP6 QUALITY AND 1.0 MIL MIN PROFILE DEPTH. FIRST COAT IS TO BE ALKYD PRIMER AT MIN 40% SOLIDS BY VOLUME. APPLIED AT 2 MILS DRY. SECOND AND THIRD COATS ARE TO BE ALKYD GLOSS ENAMEL MIN 40% SOLIDS BY VOLUME. EACH COAT APPLIED AT 1.5 MILS DRY. TOTAL COATINGS MIL MIN DRY FILM.

TYPICAL GUARD POST
NOT TO SCALE



- NOTES:**
- CLEANOUTS LOCATED IN VEHICULAR AREAS SHALL BE TRAFFIC RATED.
 - CLEANOUTS LOCATED IN PAVED AREAS SHALL BE INSTALLED FLUSH WITH FINAL GRADING.
 - CLEANOUTS FOR RAIN GARDEN UNDERDRAINS SHALL BE FLUSH WITH THE TOP OF THE BIOFILTRATION MEDIUM. CONCRETE COLLAR SHALL BE INSTALLED AT FINISH GRADE, SEE DETAIL 5, THIS SHEET.
 - CLEANOUTS ON DR 17 HDPE CONTAINMENT DRAINS SHALL INCLUDE WATERTIGHT, THREADED IPS HDPE CLEANOUT PLUG. CONCRETE CRADLE IS NOT REQUIRED FOR FUSION WELDED PIPE.

CLEANOUT
NOT TO SCALE

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR TMK REFERENCE LOCATIONS:

AFFECTED	TAX MAP KEYS
<input type="checkbox"/>	12025020
<input type="checkbox"/>	12025021

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS MEDONNELL

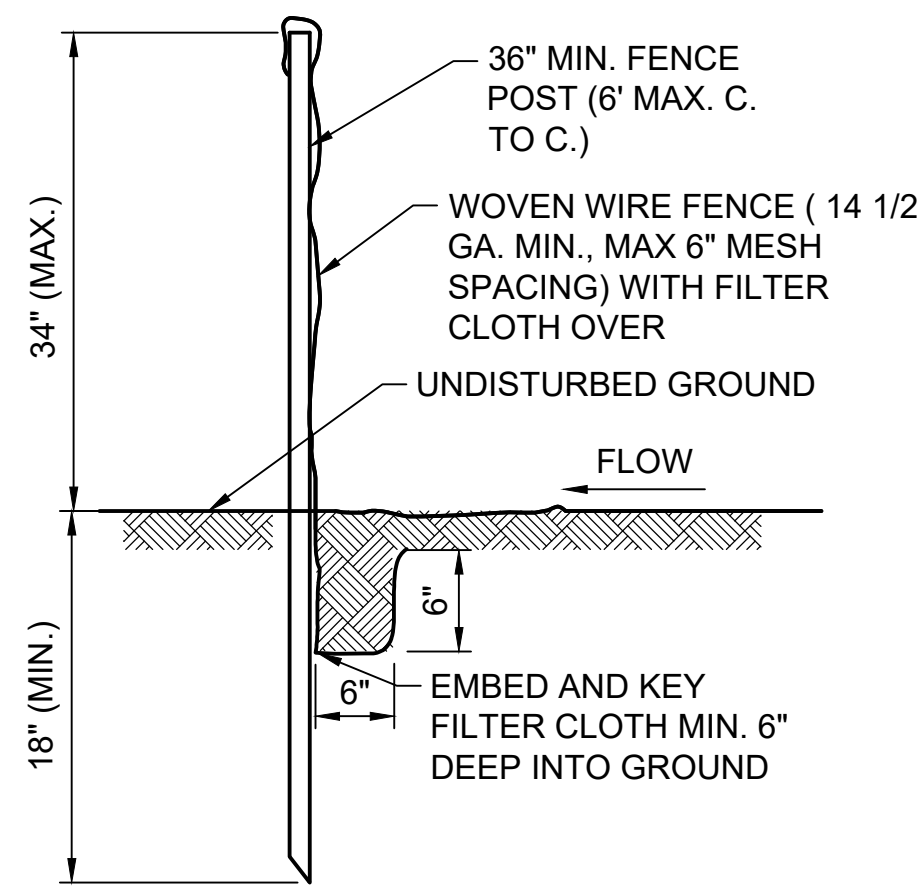
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
LICENSEE NO. 000165

date	detailed
05/05/2021	J. EICHENBERGER
designed	checked
W. BATTEY	B. HANSEN

HAWAII FUELING FACILITIES CORPORATION (HFFC)
SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819

project	contract
131790	
drawing	rev.
C-501	A
#	
file 131790_C-501.DWG	

Signature: _____ Expiration Date of the License: _____
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

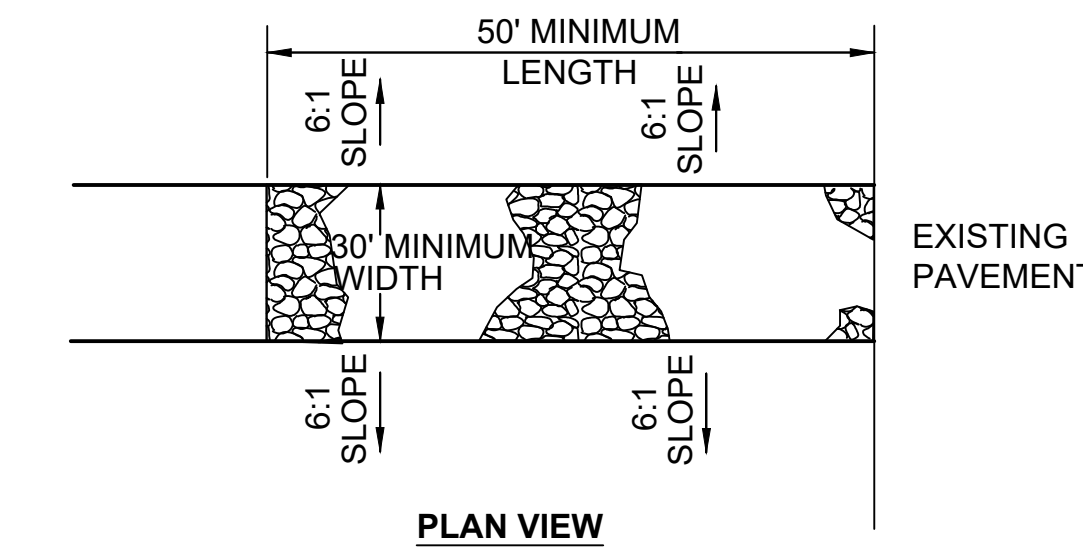
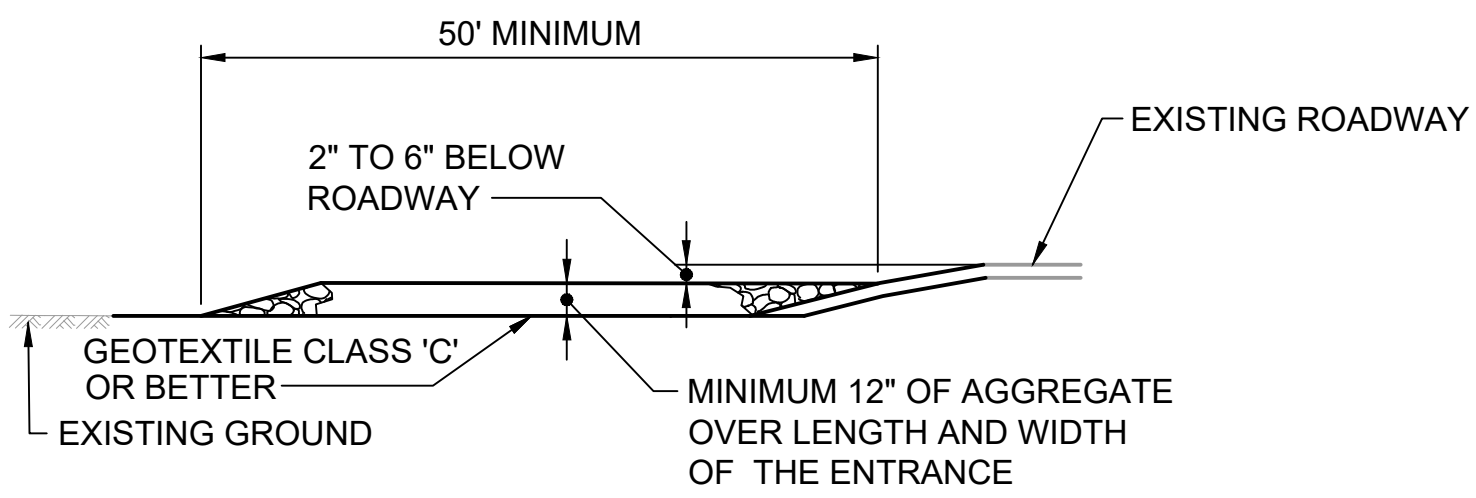


POSTS: 2" HARDWOOD.
 FENCE: WOVEN WIRE 14 1/2 GA. 6" MAX. MESH OPENING.
 FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
 PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE:

1. SEE SEDIMENT CONTROL FACT SHEET SE-1 FOR FURTHER INFORMATION AND DETAILS ON SILT FENCE IN THE CITY AND COUNTY OF HONOLULU STORM WATER BEST MANAGEMENT PRACTICE MANUAL FOR CONSTRUCTION (NOVEMBER 2011).
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION
4. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY A MINIMUM OF TWELVE INCHES AT A SUPPORT POST.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
6. SUBCONTRACTOR SHALL INSPECT SILT FENCE IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. DEFICIENCIES SHALL BE CORRECTED WITHIN 24 HOURS. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THE HEIGHT OF THE DEPOSIT APPROACHES ONE-HALF THE HEIGHT OF THE ORIGINAL SILT FENCE.

DETAIL 1
 NOT TO SCALE
 C-200
SILT FENCE DETAIL

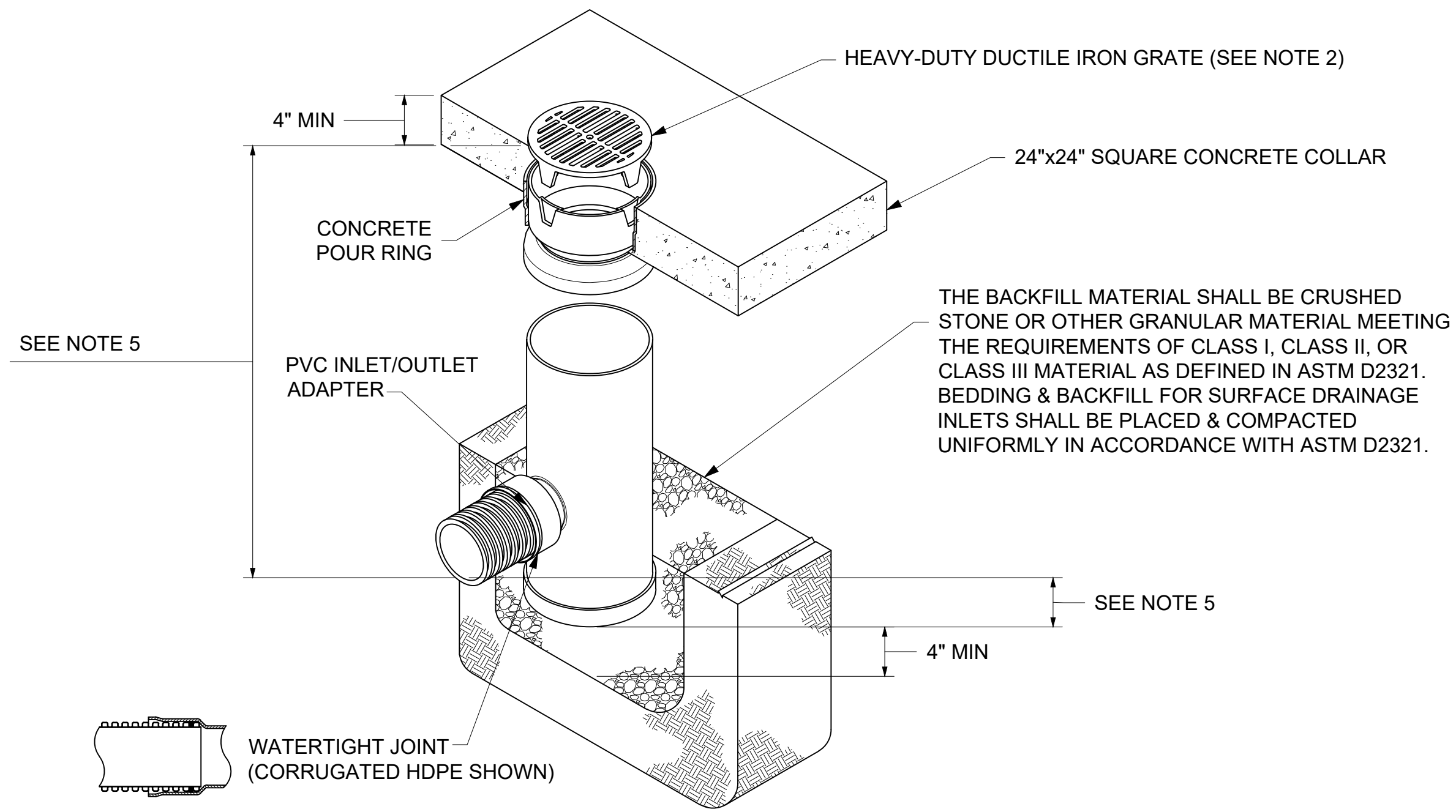


DETAIL 2
 NOT TO SCALE
 C-200
TEMPORARY STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOTES:

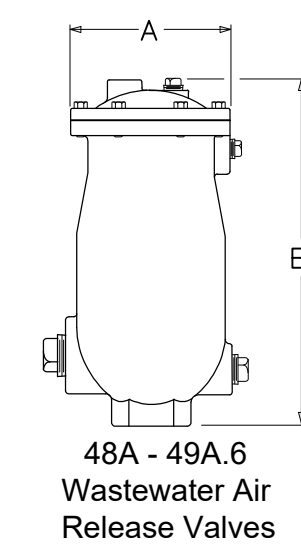
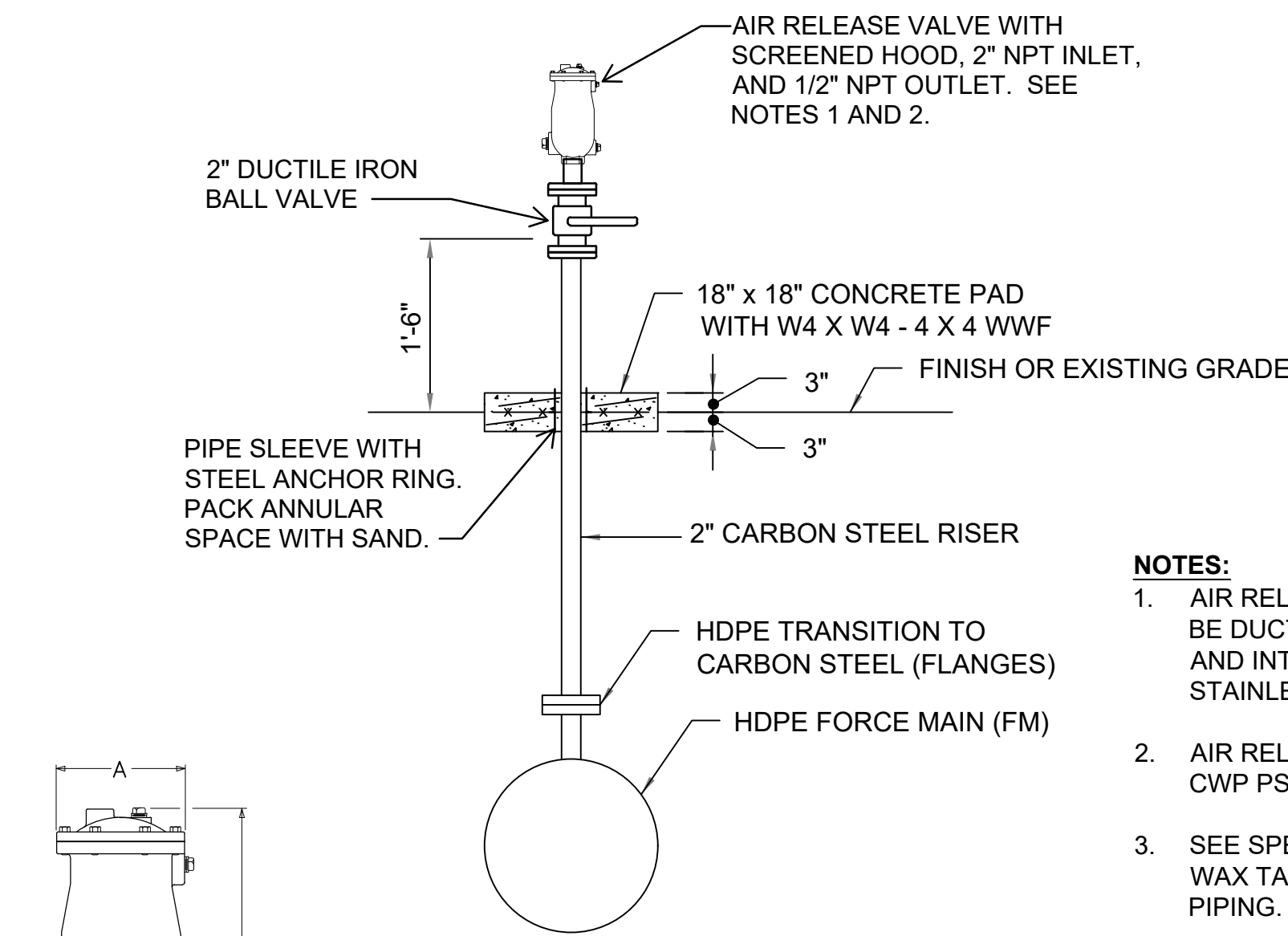
1. SEE TRACKING CONTROL FACT SHEET TR-1 FOR FURTHER INFORMATION AND DETAILS ON A STABILIZED CONSTRUCTION ENTRANCE / EXIT IN THE CITY AND COUNTY OF HONOLULU STORM WATER BEST MANAGEMENT PRACTICE MANUAL FOR CONSTRUCTION (NOVEMBER 2011).
2. NON-WOVEN GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. STONE - CRUSHED AGGREGATE (3" TO 6" DIA.) SHALL BE PLACED AT LEAST 12" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
3. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AS SHOWN ON SHEET C100 AND AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.
4. THE SIDE SLOPES OFF THE CONSTRUCTION ENTRANCE SHALL BE 6" HORIZONTAL TO 1" VERTICAL OR FLATTER AND SHALL BE SEEDED AND MULCHED.
5. SWEEP AND VACUUM STREET AT ENTRANCE OR EXIT AS NEEDED.

Scale For Microfinishing
 Millimeters
 Inches



1. DRAWING NUMBERS LISTED FOR THIS DETAIL ARE AVAILABLE FROM NYOPLAST, WWW.NYOPLAST-US.COM.
2. GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3. CUSTOM DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
4. STANDARD DRAIN BASIN HAS FIXED ADAPTER LOCATIONS OF 0° & 180°. CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
5. FOR COMPLETE DESIGN DETAILS SEE DRAWING NO. 7001-110-045
6. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR PVC SEWER (4" - 24").
7. ALL MATERIALS SHALL BE JET FUEL COMPATIBLE.

DETAIL 3
 NOT TO SCALE
 C-102
 C-103
CATCH BASIN DETAIL



WASTEWATER AIR RELEASE VALVES						
Inlet Size	Outlet Size	Model Number	CWP PSI	Orifice Size	Dimensions	
					A	B
2" NPT	1/2" NPT	48A	150	3/16"	7"	15 5/16"

NOTES:

1. AIR RELEASE VALVE BODY AND COVER SHALL BE DUCTILE IRON ASTM A536 GRADE 65-45-12 AND INTERNAL TRIM SHALL BE TYPE 316 STAINLESS STEEL.
2. AIR RELEASE VALVE SHALL BE RATED FOR 150 CWP PSI.
3. SEE SPECIFICATION SECTION 33 52 46 FOR WAX TAPE TO APPLY TO CARBON STEEL PIPING.

DETAIL 4
 NOT TO SCALE
 C-102
FORCE MAIN HIGH POINT VENT (HPV)

no.	date	by	ckd	description
A	08/24/21	WBB	BTH	60% DESIGN
B	07/05/23			PROGRESS PRINT

SEE SHEET G-101 FOR TMK REFERENCE LOCATIONS:
 AFFECTED TAX MAP KEYS
 12025020
 12025021

PRELIMINARY - NOT FOR CONSTRUCTION



9400 WARD PARKWAY
 KANSAS CITY, MO 64114
 816-333-9400
 LICENSE NO. 000165

date	detailed
05/05/2021	J. EICHENBERGER
designed	checked
W. BATTEY	B. HANSEN

HAWAII FUELING FACILITIES CORPORATION (HFFC)
SAND ISLAND STORAGE FACILITY HONOLULU INTERNATIONAL AIRPORT (HNL) 50 SAND ISLAND ACCESS RD. HONOLULU, HI 96819

SAND ISLAND STORMWATER	
CIVIL DETAILS - 2	
project	contract
131790	
drawing	rev.
C-502	A
#	
file	131790_C-502.DWG

Signature _____ Expiration Date of the License _____
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

APPENDIX B COMMENTS IN RESPONSE TO EARLY CONSULTATION



KALIHI – PALAMA NEIGHBORHOOD BOARD NO. 15
c/o NEIGHBORHOOD COMMISSION • 925 DILLINGHAM BOULEVARD, SUITE 160 • HONOLULU, HAWAII, 96817
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: <http://www.honolulu.gov/nco>

SUBJECT: Community Environmental Concerns

To All Concerned,

Similar to the situation with Factory Street, the actions of the past must be rectified, and in 2015 there was a spill that occurred for which thousands of gallons of fuel leaked into the surrounding ground. By federal consent decree, Dkt. No. OPA-311-09-2021-001, HFFC was ordered to correct the situation by installing additional liners as a redundancy system which will protect the environment. Furthermore, we of the Neighborhood Board understand how vital the protection of our environment for current and future generations and the delicate balance between the needs of our communities concerning Aerial transportation for inter-island, continental, and international flights.

The company selected Burns & McDonnell Engineering Company specializes in design and construction of jet fuel facilities. This employee-owned company has many years of experience and has the capabilities that are needed to design and install the liner system.

Burns & McDonnell will be enhancing the Facility's secondary containment by installing an asphalt liner and industrial spray coating on Lots 2, 3, and 3.5 of the Facility. Therefore, we of the Kalihi-Palama Neighborhood No. 15 board support the installation of the Facility's project and the secondary containment barrier. However, with this support we demand to be updated on the status of installation including but not limited to: incidents during the installation whereby the surrounding environment is affected by the activities of the installation, or any other activities that present a danger to the environment and surrounding residents. With this collaboration with the community, we can foster a relationship with the community within Kalihi-Palama.

Ken Farm

Chair, Board Member CAC, Oahu MPO
Neighborhood Board No. 15.
Kalihi-Palama, Iwilei, A'ala, Sand Island

APPENDIX C LETTER TO STATE HISTORIC PRESERVATION DIVISION



05 June 2023

Alan Downer, Administrator

State Historic Preservation
Division Department of Land and
Natural Resources 601 Kamokila
Boulevard, Suite 555

Kapolei, HI 96707

via: HICRIS (<https://shpd.hawaii.gov/hicris>)

Subject: State Historic Preservation Review – HRS 6E-42 Review
Sand Island Fuel Facility Stormwater System Upgrade
6 Sand Island Access Road, Honolulu Hawai'i
Island of Oahu

TMK: 1 20 250200000

Dear Mr. Downer

ERM submits this letter to provide a project summary for State Historic Preservation Division (SHPD) review per Hawaii Revised Statute (HRS) 6E-42 in connection with the Sand Island Fuel Facility Stormwater System Upgrade. The proposed scope of work includes installing asphalt liners and industrial spray coating on lots at the project site. The project site, Hawai'i Fueling Facilities Corporation (HFFC) Sand Island Storage Facility (the "Facility"), is located at 6 Sand Island Access Road, Honolulu, Hawai'i. It is located approximately 200 feet east of Ke'ehi Lagoon, which is connected to Mamala Bay and the Pacific Ocean. The Facility is in close proximity to navigable waters and is entirely within a Special Management Area (SMA).

The Facility is owned by HFFC, organized under the laws of Hawai'i, and operated by Signature Flight Support, LLC (SFSC). The facility is used for receiving, storing, and distributing jet fuel to operations at the Hawai'i International Airport (HNL), located 1.5 miles northwest of the Facility. Jet fuel is received at the facility using an underground 18-inch pipeline from Pier 51A and B (ERM 2021). Approximately 42 million gallons of jet fuel can be stored in the 16 above-ground bulk storage tanks in Lots 2,3, and 3.5. Lot 2 contains seven storage tanks, while lots 3 and 3.5 contain nine storage tanks. The tanks are surrounded by a concrete containment wall, gravel covered berm, six-foot-deep underground slurry wall, and an eight-foot-deep by 600-foot-long trench (ERM 2023). These installations were constructed with the goal of preventing contamination of groundwater by containing jet fuel in the event of a spill.

In January of 2015, a leak in the bottom of tank 2 released 42,000 gallons of jet fuel, which were not completely captured by the existing installations in the primary containment area. The fuel had leaked into the soil and migrated below the underground slurry wall and offsite (ERM 2020). It was

revealed that the Spill Prevention, Control, and Countermeasure (SPCC) plan did not provide an impermeable secondary containment system capable of effectively capturing and containing discharged oil until it is able to be cleaned up.

Under the Administrative Order on Consent, Docket No. OPA-311-09-2021-001, provided by the United States Environmental Protection Agency (EPA), HFFC and SFSC are responsible for enhancing the secondary containment of tanks such that it is sufficiently impervious that any discharge of oil will not escape the containment system until clean-up can occur, and the facility must be constructed to ensure that diked areas are sufficiently impervious to contain discharged oil. As such, HFFC and SFSC plan to install an asphalt liner and industrial spray coating on Lots 2, 3, and 3.5 to fulfill this requirement. Additionally, collection inlets, a storm drainpipe, lift station pumps, an oil-water separator (OWS), and an observation basin will be added to the existing stormwater discharge system. This proposed work will require Special Management Area Permit approval and a Building Permit from the City and County of Honolulu Department of Permitting and Planning, and coverage under the National Pollutant Discharge Elimination System Construction General Permit.

Per Hawaii Administrative Rules (HAR) §13-284-5, ERM offers the following documentation to show that no historic properties are present in the project area, and requests that the SHPD provide a letter of concurrence of No Historic Properties Affected. All maps mentioned in the text below are attached to this document.

A topographic map from 1928 shows the location of the Facility (the red rectangle) to be offshore in the waters of what is now the Ke'ehi Boat Harbor, indicating it is located west of the original shoreline. This area is unlikely to contain cultural resources as it is man-made land that was created using dredged material from the nearby ocean. Additionally, there are five fishing ponds depicted on this 1928 same map with the closest to the Facility being either Auiki Pond or Ananoho Pond. Both of these ponds, however, were filled during World War II and an Army port and warehouse complex was built over. As the Facility is west of these ponds, excavations for the project will not pose a risk to the pond walls if they are still intact.

The Facility is first depicted on land in 1953, suggesting that it is located on land that was created by reclamation projects that enlarged "Sand Island". One of these reclamation projects included the creation of a seaplane channel immediately west of the Facility. Aerial imagery from the period does not depict any permanent structures on the newly created land and the area appears sandy. In contrast, by 1968, the area had been industrialized and a recreational pier as well as storage tanks are immediately obvious in the surrounding area. This trend continues and intensifies up to the modern day with the Facility currently surrounded by paved areas, suggesting the original soil horizon has been thoroughly disturbed and historic-era cultural resources are unlikely to occur. Additionally, a field inspection for the creation of a shipyard immediately west of the Facility in 2006 included a site visit that recorded soils as fill and the surrounding area as thoroughly impacted. Any non-paved soils were recorded as fill with some coral noted. Similarly, the Environmental Impact Statement for Kapalama Container Terminal Project 50 feet east of the Facility, came to a similar conclusion, noting that archaeological studies in the surrounding area have had limited results with major finds located along the pre-contact coastline.

As the Facility is located west of the pre-contact shoreline and currently consists of fill with much of the area covered with pavement, a cultural survey of the area will not provide any additional insight into the surrounding area or potential impacts of the proposed work activities. As such, we are requesting that SHPD concur with the assessment that the project will have no historic properties affected.

Yours sincerely,

Sandra Pentney
Principal Consultant, Archaeologist

References

ERM. 2020. Final Environmental Hazard Management Plan. #6 Sand Island Access Road, Honolulu, Hawaii 96819. March 2020.

ERM. 2021. Facility Response Plan Sand Island Fuel Facility. Hawaii Fueling Facilities Corporation Sand Island Fuel Facility.

ERM. 2023. Spill Prevention, Control, and Countermeasure Plan. #6 Sand Island Access Road, Honolulu, Hawaii 96819.

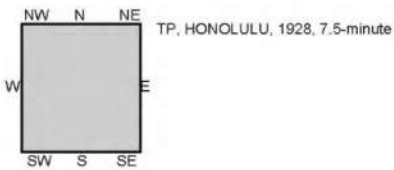


Historical Topo Map

1928

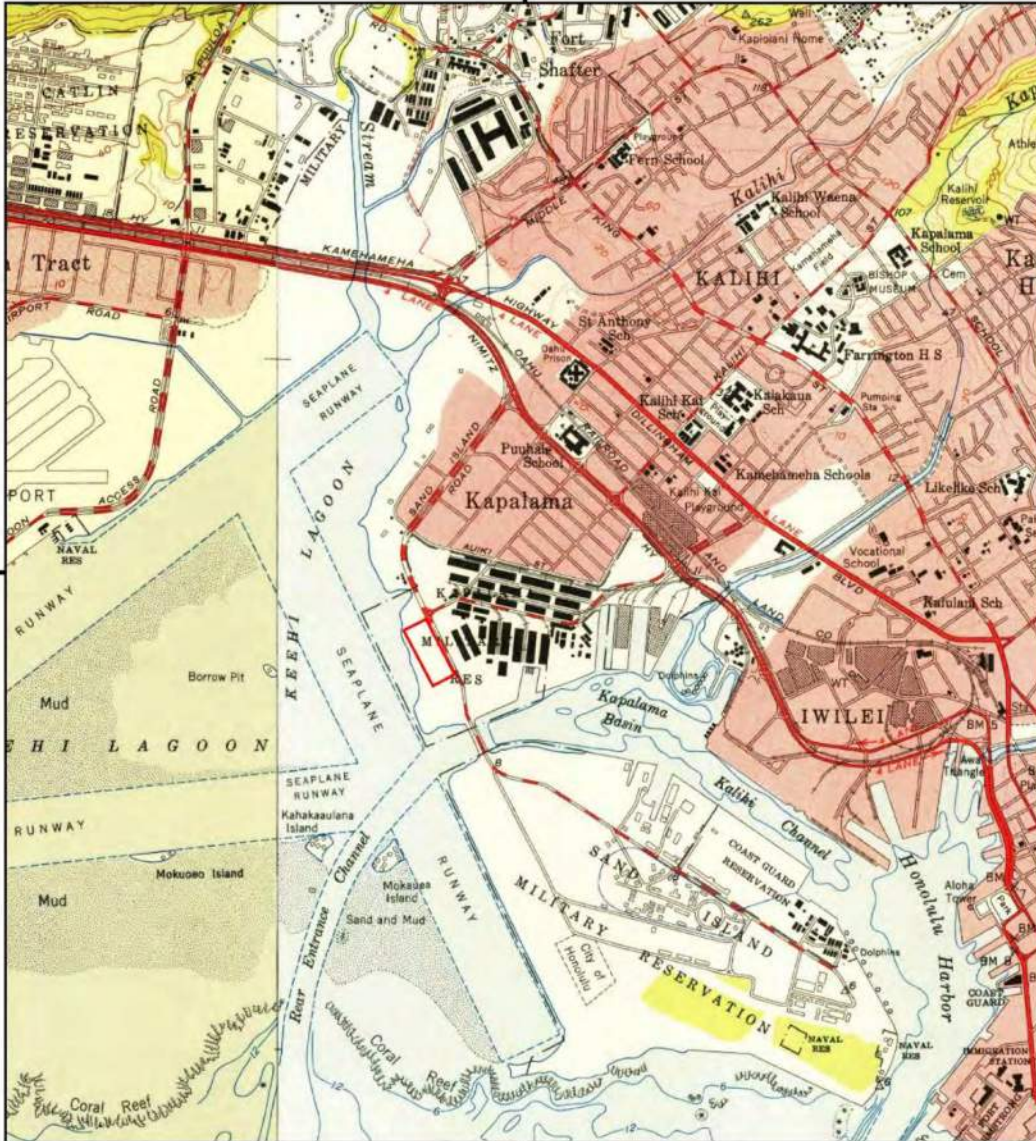


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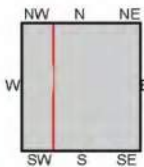


SITE NAME: Auki Substation Parcel
 ADDRESS: Auki Street
 Honolulu, HI 96819
 CLIENT: ERM





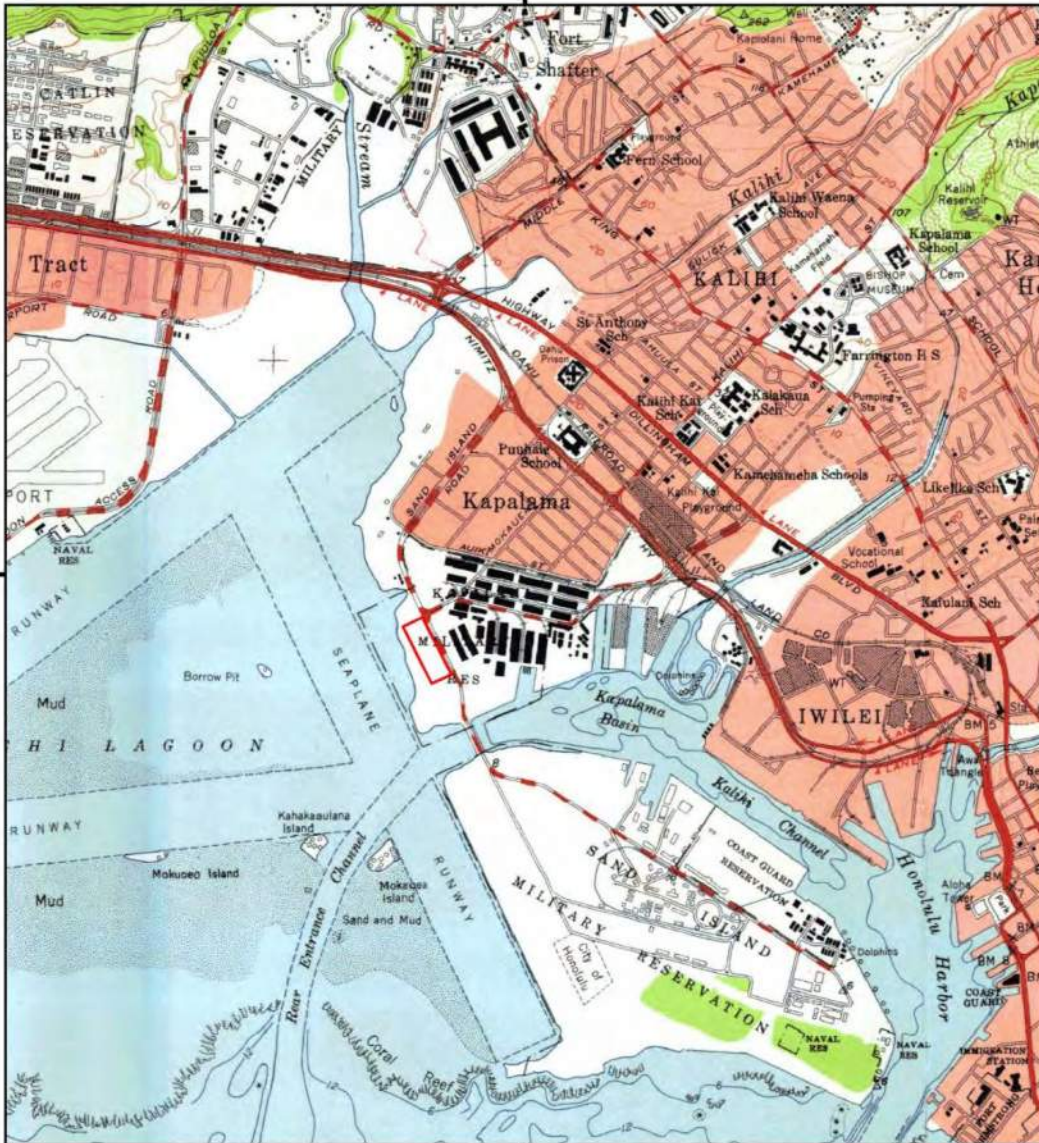
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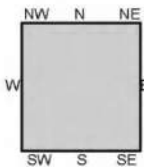
TP, Honolulu, 1953, 7.5-minute
W, Puuloa, 1953, 7.5-minute

SITE NAME: Aiki Substation Parcel
ADDRESS: Aiki Street
Honolulu, HI 96819
CLIENT: ERM





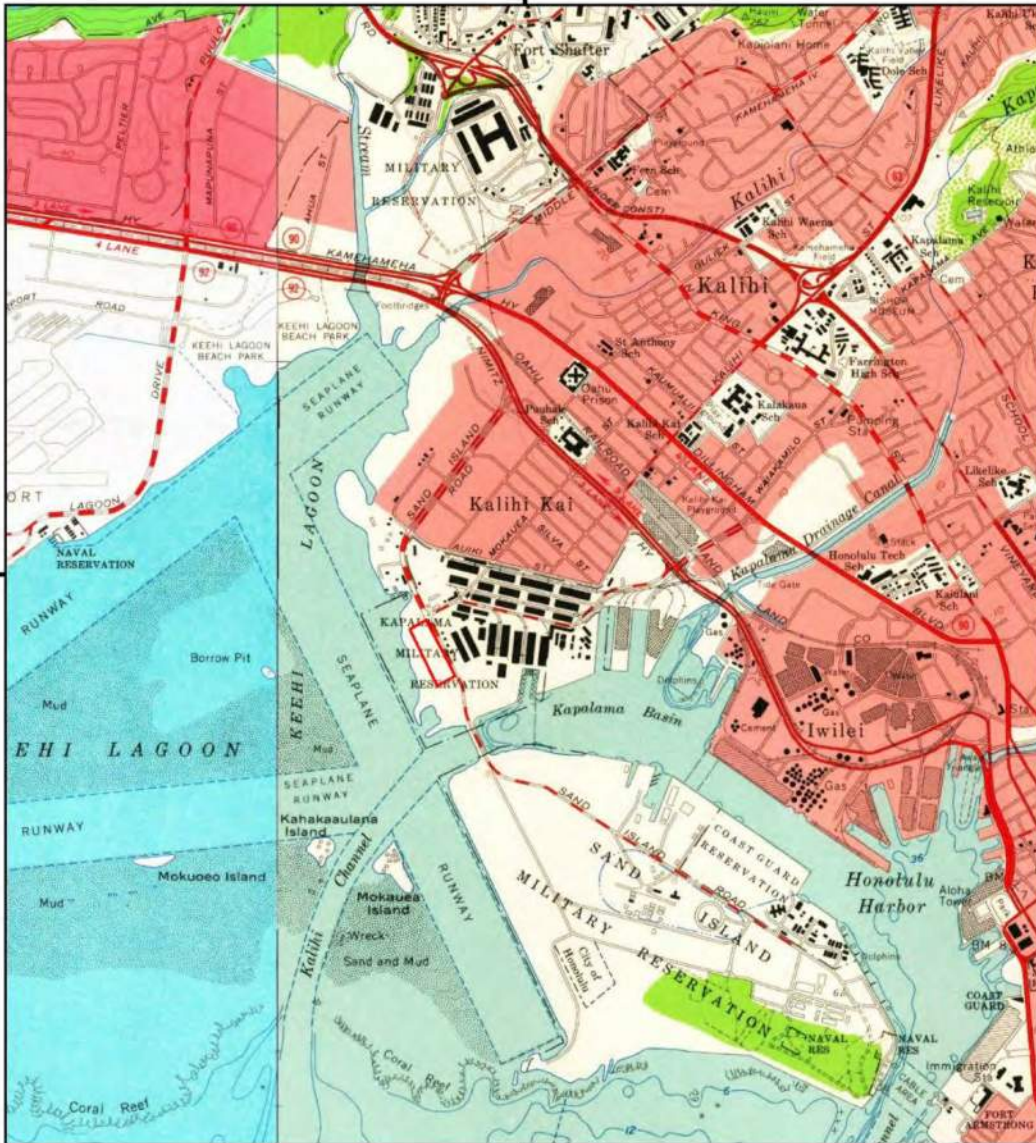
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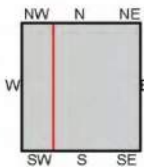
TP, HONOLULUCINITYSOUTH, 1954, 7.5-minute

SITE NAME: Auki Substation Parcel
 ADDRESS: Auki Street
 Honolulu, HI 96819
 CLIENT: ERM





This report includes information from the following map sheet(s).



TP, Honolulu, 1959, 7.5-minute
W, Puuloa, 1959, 7.5-minute

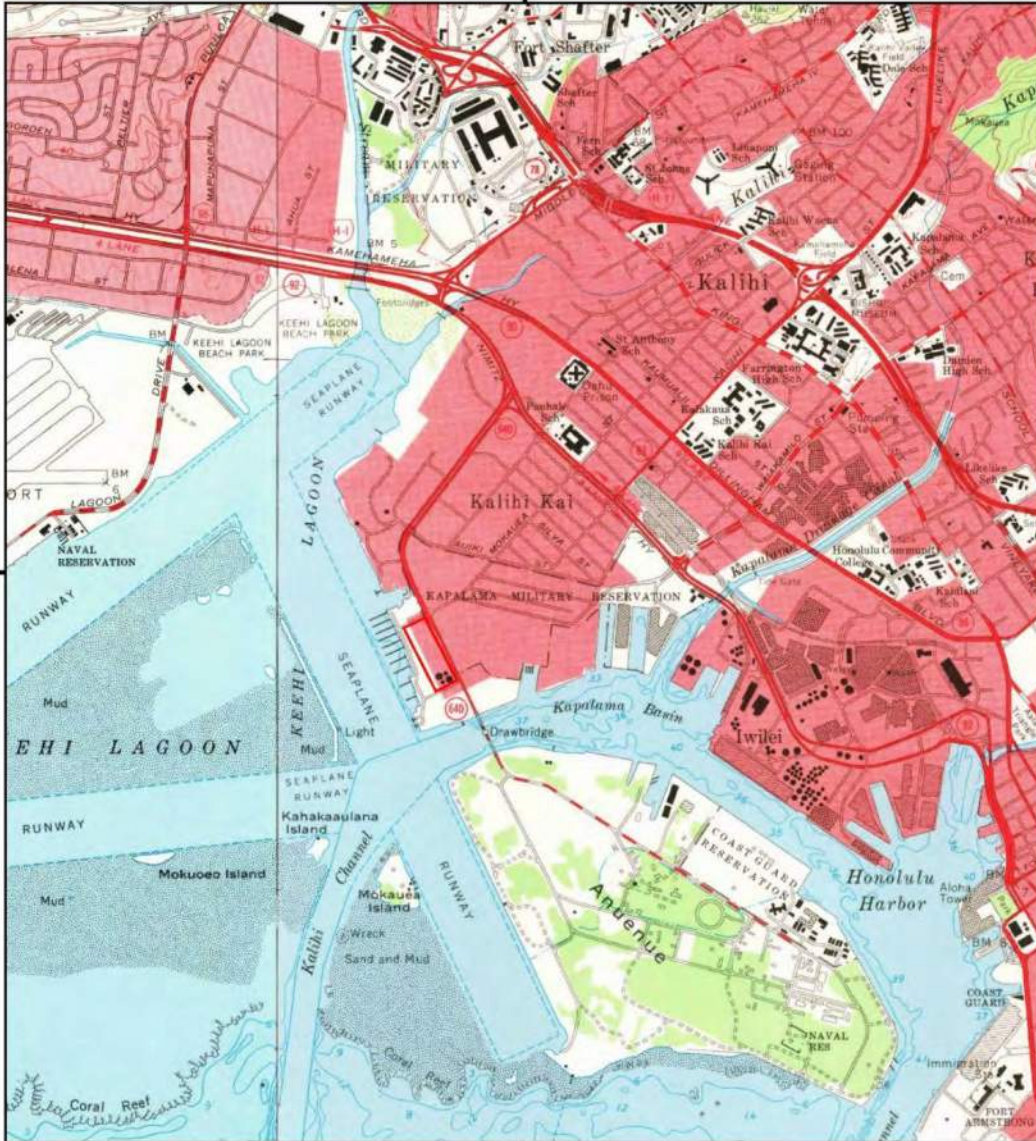
SITE NAME: Auki Substation Parcel
ADDRESS: Auki Street
Honolulu, HI 96819
CLIENT: ERM



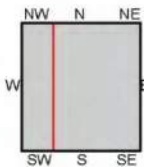


Historical Topo Map

1968, 1969



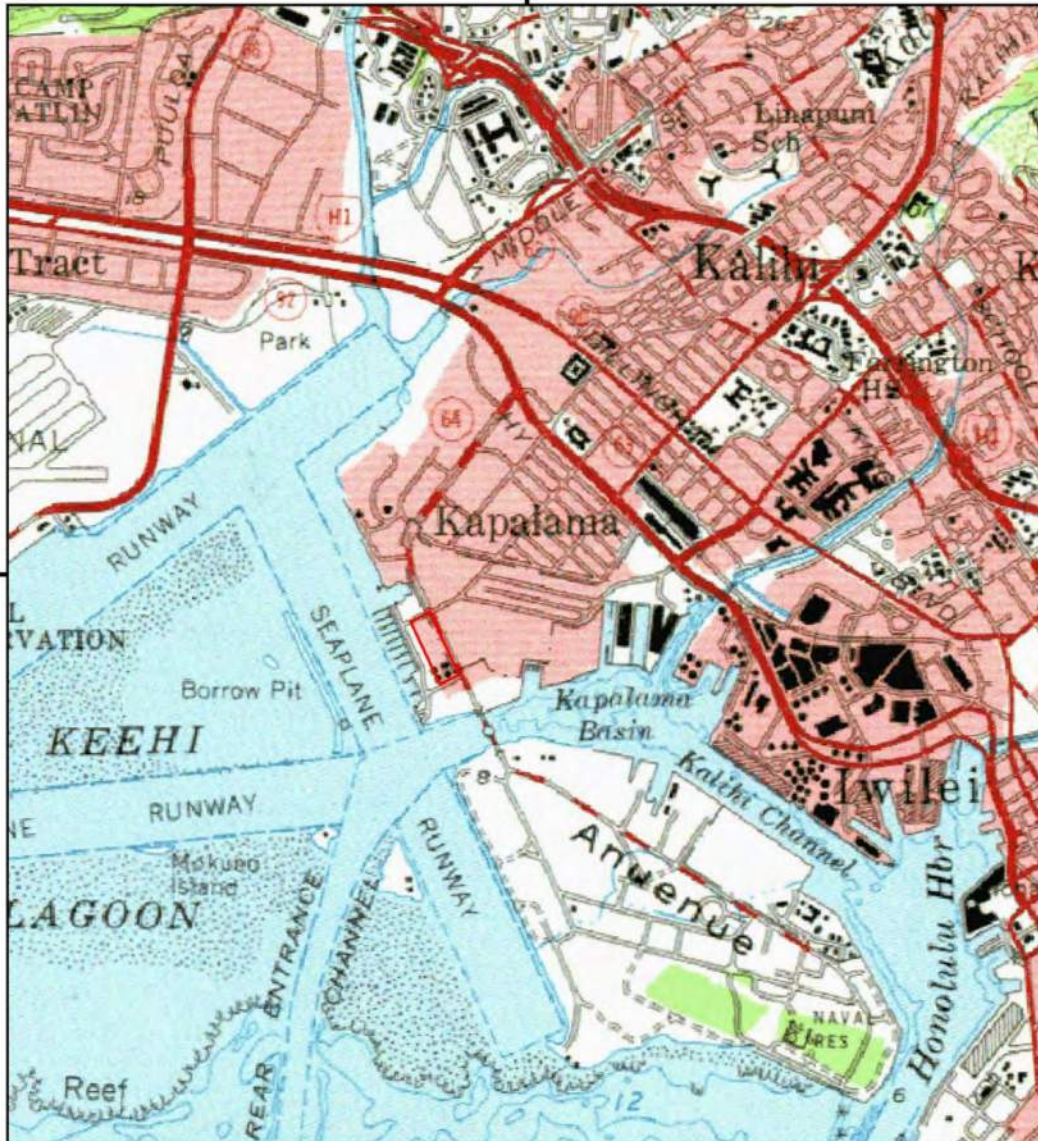
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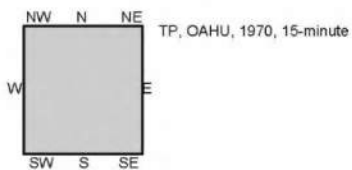
TP, Honolulu, 1969, 7.5-minute
W, Puuloa, 1968, 7.5-minute

SITE NAME: Auki Substation Parcel
ADDRESS: Auki Street
Honolulu, HI 96819
CLIENT: ERM



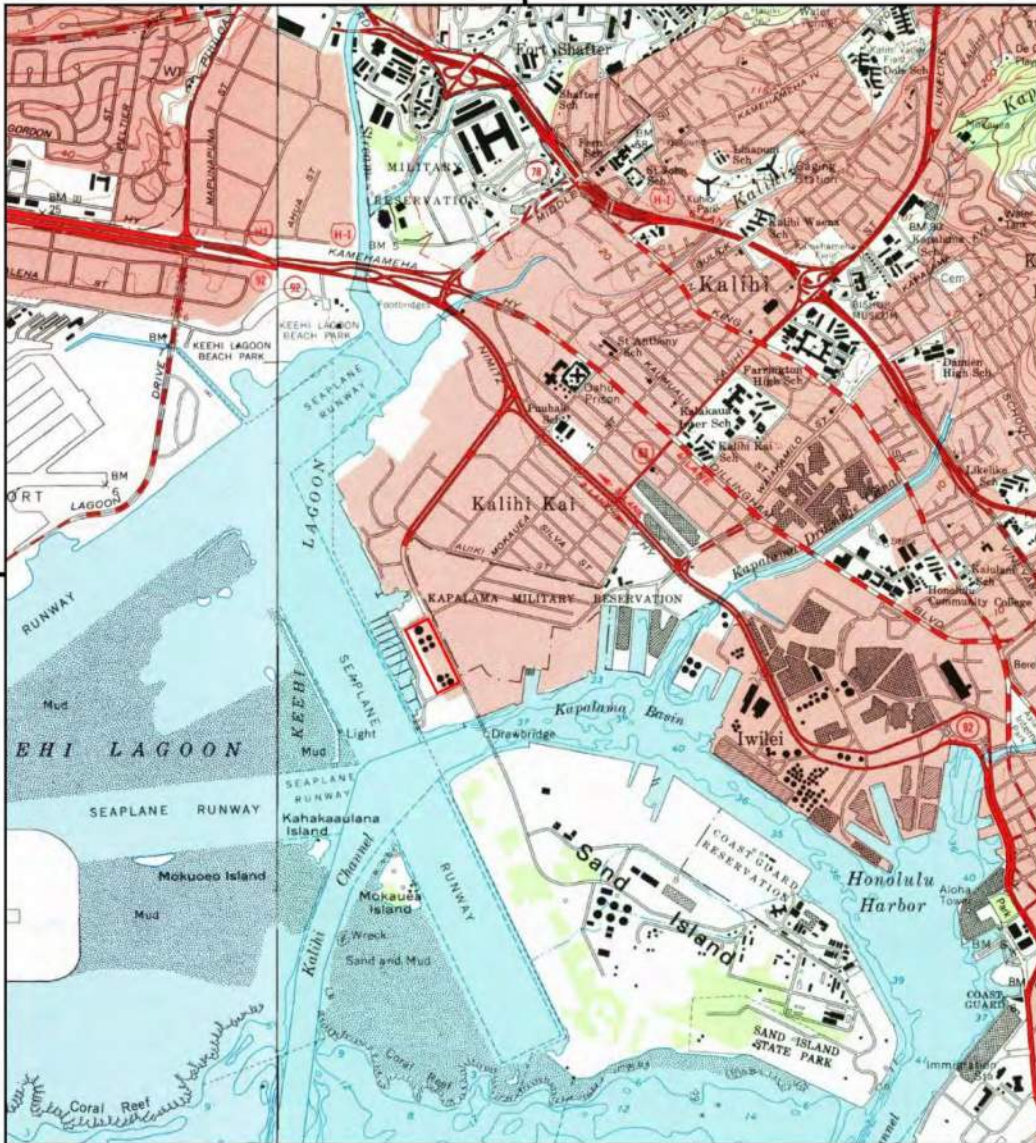


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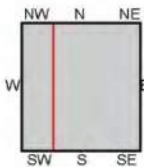


SITE NAME: Auki Substation Parcel
 ADDRESS: Auki Street
 Honolulu, HI 96819
 CLIENT: ERM





This report includes information from the following map sheet(s).



TP, Honolulu, 1983, 7.5-minute
 E, Honolulu, 1983, 7.5-minute
 W, Pearl Harbor, 1983, 7.5-minute

SITE NAME: Auikei Substation Parcel
 ADDRESS: Auikei Street
 Honolulu, HI 96819
 CLIENT: ERM



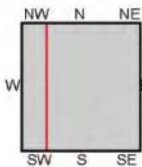


Historical Topo Map

1998, 1999



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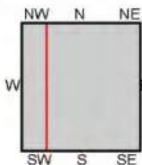
TP, Honolulu, 1998, 7.5-minute
W, Pearl Harbor, 1999, 7.5-minute

SITE NAME: Auiki Substation Parcel
 ADDRESS: Auiki Street
 Honolulu, HI 96819
 CLIENT: ERM





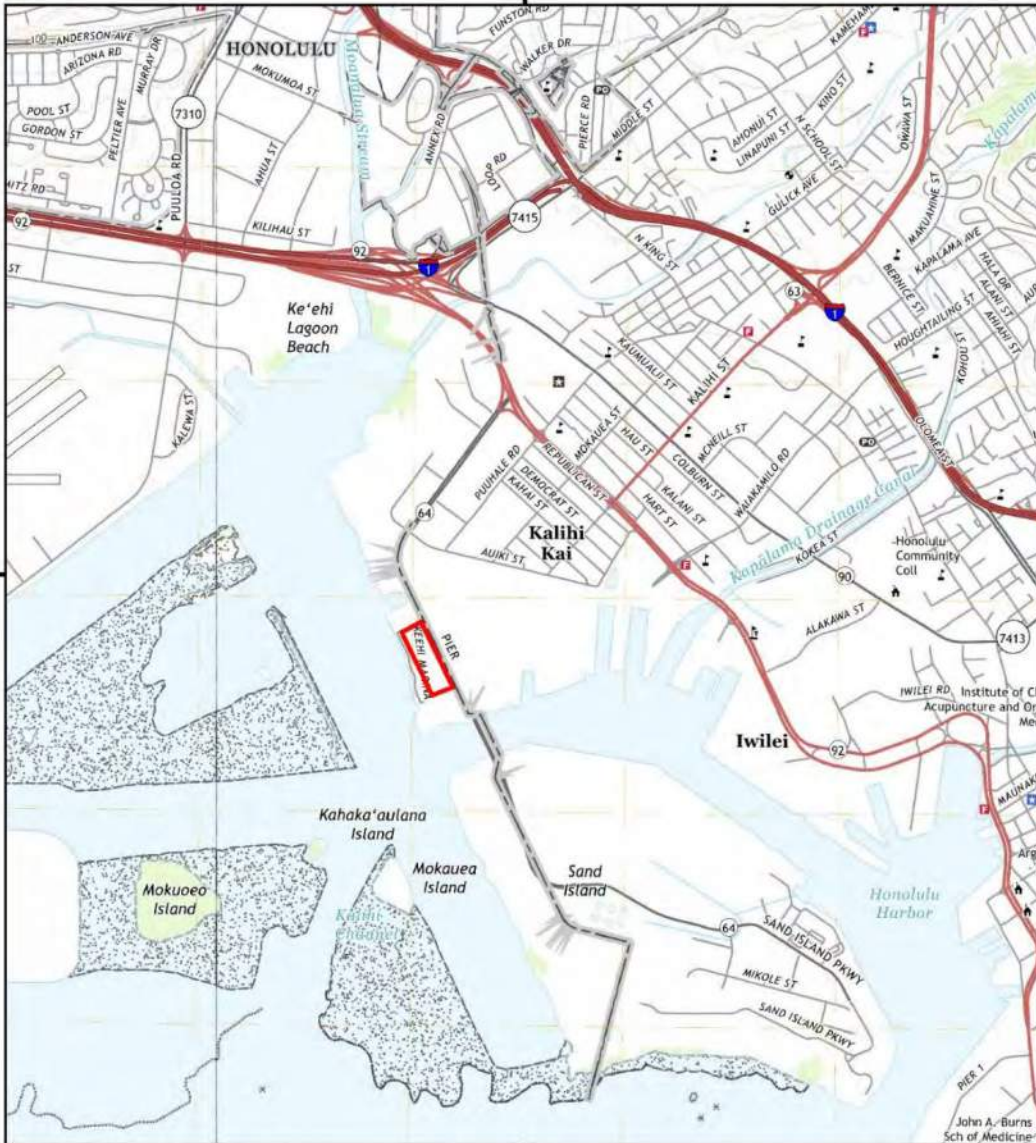
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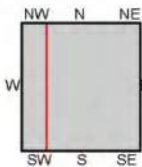
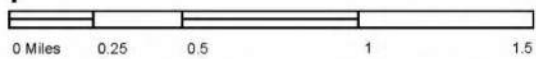
TP, Honolulu, 2013, 7.5-minute
W, Pearl Harbor, 2013, 7.5-minute

SITE NAME: Auki Substation Parcel
ADDRESS: Auki Street
Honolulu, HI 96819
CLIENT: ERM





This report includes information from the following map sheet(s).



TP, Honolulu, 2017, 7.5-minute
W, Pearl Harbor, 2017, 7.5-minute

SITE NAME: Auiki Substation Parcel
ADDRESS: Auiki Street
Honolulu, HI 96819
CLIENT: ERM



Preliminary Construction Drawings dated 05/05/21 were attached to the letter submitted to SHPD.

Revised Preliminary Construction Drawings dated 07/05/23 are attached as Appendix A to the
Environmental Assessment

ERM has over 160 offices across the following countries and territories worldwide

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Australia	New Zealand
Belgium	Peru
Brazil	Poland
Canada	Portugal
China	Puerto Rico
Colombia	Romania
France	Russia
Germany	Senegal
Ghana	Singapore
Guyana	South Africa
Hong Kong	South Korea
India	Spain
Indonesia	Switzerland
Ireland	Taiwan
Italy	Tanzania
Japan	Thailand
Kazakhstan	UAE
Kenya	UK
Malaysia	US
Mexico	Vietnam
Mozambique	

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